

Children's Hospital of Eastern Ontario (CHEO) 1Door4Care Phase 1A - Parking Garage Traffic Impact Assessment B+H Architects

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# Introduction

EXP was retained by B+H Architects on behalf of Children's Hospital of Eastern Ontario (CHEO) to prepare a Traffic Impact Assessment (TIA) for the parking garage being constructed as a part of the Phase 1 1Door4Care (1D4C) hospital expansion located at 401 Smyth Road. The proposed parking garage is to be located on the northeast corner of the Ring Road (E-W) and Emergency Access Road Intersection as shown in *Figure 1*. The new parking garage is anticipated to house 1,050 parking spaces. Throughout this report the parking garage is considered to be the proposed development. The 1D4C building will have a separate and subsequent TIA completed and it will address the trip generation and travel impacts associated with it.

Figure 1: Site Location



# 1. Screening

A TIA screening form for the proposed development was completed to identify the needs of the TIA. A copy of the completed screening form is attached to this report as *Appendix A* and the findings are as follows:

- **TRIP GENERATION** The proposed parking garage is anticipated to include 1,050 parking spaces. On its opening, the parking garage will replace existing surface parking lots currently used to service existing hospital trips. These surface parking lots will be displaced by the parking garage and the 1D4C building construction. However, given a pent-up demand for CHEO staff parking passes and room within the new garage to accommodate them before the occupation of the 1D4C building, some new vehicle trips will be generated. As a result, building the new parking garage will create more than 60 new vehicle trips; thus, it triggers the trip generation component of the TIA.
  - **LOCATION** The parking garage is not in a design priority area or transit-oriented development zone and does not propose a new driveway to a boundary street; thus, the location triggers are not satisfied.
    - **SAFETY** The proposed development does not trigger any of the safety triggers.



Upon review of the City's screening assessment, EXP has confirmed the need to complete a TIA for the proposed development.

# 2. Scoping

# 2.1 Existing and Planned Conditions 2.1.1 Proposed Development

CHEO is planning to expand hospital facilities within the existing CHEO campus. This includes a proposed treatment center for children called 1Door4Care. As shown in *Figure 1*, the building is anticipated to displace an existing surface parking lot currently in that location. It is anticipated that the 1D4C building will be occupied by 2027. As part of this expansion, a new 33,500 m<sup>2</sup> parking garage will also be constructed within the CHEO campus and it represents the "proposed development" in this TIA.

The parking garage will be constructed in 2024, prior to the 1D4C expansion that is expected to be complete by 2027.

As shown in *Figure 1*, the parking garage is anticipated to be located in the northwest quadrant of the intersection of General Hospital Access Road and Ring Road (E-W). The parking garage is expected to be a 7-storey building (including an open-air roof) that houses 1,050 parking spaces. The first two floors of the proposed structure will service visitor parking demand and the 5 floors above will service staff parking demand. It is anticipated that this parking garage will be constructed and open for use by 2024.

On it's opening, the parking garage will replace Lot E, an existing 270 stall gravel surface parking lot, and house an additional 286 surface parking stalls from Lot B which will be displaced by the 1D4C building. *Figure 2* illustrates the parking lot impact due to the parking garage and the future 1D4C building construction.



### Figure 2: Parking Facilities



The site is currently zoned as Major Institutional (I2) Zone. The purpose of the Zone I2 is to:

- Ensure that major institutional uses such as hospitals, colleges, and universities are located at appropriate locations within areas designated as General Urban Area, Central Area, and Mixed-Use Centre in the Official Plan;
- Ensure that these large-scale high-traffic generating institutions locate only on large parcels of land, with direct access to an arterial road and near rapid transit stations and/or service;
- Impose regulations that ensure that the size and intensity of these uses are compatible with adjacent uses; and
- Permit minor institutional uses and provide for a range of ancillary service uses.

**Table 1** outlines the proposed land uses that will be referenced for this analysis as identified and obtained from the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* 11<sup>th</sup> *Edition*. Please note that the parking garage is not anticipated to generate any new trips on its own but will facilitate the need for a pent-up demand that will generate new auto trips to the campus. There are up to 360 staff on an existing parking waitlist. It is assumed spare spaces in the parking garage will be filled by this waitlist. Information provided by the Trip Generation Manual with assist in identifying the share of the 360 staff parking volumes occurring at the peak travel times and the splits in and out of the garage.

### Table 1: Proposed Land Use

Land Use Code	Size	Land Use
610	33,500 m <sup>2</sup>	Hospital

Vehicle access to the parking garage is anticipated to be provided from Ring Road (E-W) via a full movement access.

# 2.1.2 Existing Conditions

### **Roads and Traffic Control**

The characteristics of the roads and intersections in the vicinity of the subject site are described below. Although an analysis of all intersections identified below has been undertaken, the focus of the TIA is to address the operation of those intersections that fall under the jurisdiction of the City of Ottawa and not those on the hospital road network.

- Smyth Road
  - Smyth Road is a four-lane east-west running arterial road which features a posted speed limit of 50 km/h. The road features an urban cross-section with sidewalks on both sides of the road. Two signalized intersections serve the overall hospital and medical campus (CHEO/Ottawa General Hospital): Smyth Road / Ring Road (N-S) / South Haven Place (more focused to serve CHEO) and Smyth Road / General Hospital Access Road. Smyth Road / Ring Road (N-S) / South Haven Place features no turn lanes on Smyth Road. Smyth Road / General Hospital Access Road (more focused on serving OGH) features an eastbound left-turn lane and a westbound right-turn lane. Smyth Road is classified as a Spine Cycling Route and Truck Route by the City of Ottawa.
- Ring Road
  - Ring Road is a two-lane road with a posted speed of 50 km/h that circles the CHEO and the General Hospital Campus. Portions of Ring Road have sidewalk; however, it is not a continuous network. The northern portion of Ring Road features a multi-use path on its north side. The intersection of Ring Road (N-S) / Ring Road (E-W) in the southwest area of the campus is stop-controlled in the E-W direction. The Smyth Road / Ring Road (N-S) / South Haven Place intersection is signalized with southbound left and right turn lanes. North and southbound thru movements are not permitted at this intersection.
- General Hospital Access Road



- General Hospital Access Road is a north-south running local road that connects Ring Road to Smyth Road and provides access to the Ottawa Hospital General Campus. The road features sidewalks on both sides of the road. The intersection of Smyth Road / General Hospital Access Road features two southbound left turn lanes and one right turn lane. The intersection with Ring Road (E-W) is stop-controlled in the southbound, eastbound, and westbound directions, and is free-flowing in the northbound direction.
- Hospital Link Road
  - Hospital Link Road is an east-west running two-lane local road with a posted speed of 50 km/h. The road connects Ring Road to Alta Vista Road. There is no sidewalk along Hospital Link Road; however, there is a bidirectional multiuse path on its south side.

The existing lane configuration and traffic controls for the study area road network are presented in Figure 3.



Figure 3: Existing Lane Configuration and Traffic Controls

# Walking and Cycling

Walking and cycling facilities are somewhat limited within and around the CHEO campus. Existing facilities are as follows:

- Smyth Road features sidewalk on both sides of the road.
- The northern portion of Ring Road has a bi-directional multi-use path on its north side.
- Sidewalks are present intermittently along portions of Ring Road.

# **Existing Transit Operations**

The following transit routes pass by or enter the CHEO Campus:



- Route 45: Hospital to Hurdman & N Rideau
  - Route 45 is a route that runs between CHEO Campus and Hurdman Station. It runs 7 days a week with 15minute weekday headways and 30-minute weekend headways. In the vicinity of the CHEO Campus, bus stops are located in the eastbound and northbound direction of Ring Road.
- Route 55: Elmvale to Westgate
  - Route 55 is a route that runs between Elmvale and Westgate, stopping at the CHEO front door as part of its route. It runs 7 days a week with 15-minute weekday headways and 30-minute weekend headways. In the vicinity of the CHEO Campus, a few bus stops are located along Ring Road and Smyth Road.
- Route 609: De La Salle to Elmvale
  - Route 609 is a route that runs between De La Salle and Elmvale, stopping along Smyth Road as part of its route. It runs a limited service on weekdays only. In the vicinity of the CHEO Campus, a few bus stops are located along Smyth Road.

Snippets of the three route maps associated with these routes are shown in Figure 4.



Figure 4: OC Transpo Transit Route Maps 45, 55, and 609

# **Existing Traffic Management Measures**

There are no existing traffic management measures currently provided near the site.

# **Traffic Volumes**

Traffic volumes at the study intersections were provided by the City of Ottawa's Public Works Department or taken from a CHEO expansion traffic study completed by Stantec in June 2021. The City of Ottawa traffic counts and the traffic volume figures from the Stantec report are attached as **Appendix B**. Turning movement counts were collected during weekday AM and PM peak periods. **Table 2** shows the month and year that traffic counts were collected.



Table 2: Collected Turning Movement Counts

Location	Month / Year	Source*
Ring Road (N-S) / Hospital Link Road	February / 2020	Stantec Traffic Study
Ring Road (N-S) / CHEO Access Road	February / 2020	Stantec Traffic Study
Ring Road (N-S) / Ring Road (E-W)	February / 2020	Stantec Traffic Study
Ring Road (N-S) / Smyth Road	October / 2022	City of Ottawa Traffic Count
CHEO Access Road / Ring Road (E-W)	February / 2020	Stantec Traffic Study
Emergency Access Road / Ring Road (E-W)	February / 2020	Stantec Traffic Study
General Hospital Access Road / Ring Road (E-W)	February / 2020	Stantec Traffic Study
General Hospital Access Road / Smyth Road	December / 2019	City of Ottawa Traffic Count

\*Stantec Traffic Study is the 1Door4Care: Children's Hospital of Eastern Ontario (CHEO) 1Door4Care Project – Transportation Study (June 2021) prepared by Stantec.

To develop 2022 traffic volumes, a 1% annual growth rate was applied to the traffic counts collected prior to 2022. To develop the 1% growth rate, the City of Ottawa's long-range model (Exhibit 2.11 of the 2013 TMP) was used to provide the growth rate to/from the inner suburbs between 2011 and 2031.

It should be noted that the growth rate was only applied to through traffic along Smyth Road as traffic growth on the CHEO campus is largely based on the expansion of on-site services and facilities. *Figure 5* illustrates the Existing 2022 traffic volumes at the study area intersections.

Figure 5: Existing 2022 AM and PM Peak Hour Volumes





### **Collision History**

Collision data was provided by the City of Ottawa for the period of 2016 to 2020 along Smyth Road. Collision data was not available within the hospital campus as these are private roads. The collision data was reviewed to determine if there are any collision patterns during the five (5) year period. *Table 3* provides a summary of the collision data. The raw collision data can be found in *Appendix C*.

### Table 3: Collision Data Summary

	Collision Type	Ring Road (N-S) /	General Hospital Access /	Smyth Road between Ring Road (N-S)
		Smyth Road	Smyth Road	and General Hospital Access
Total	All	17	18	5
	Non-Fatal Injury	4	1	2
Classification	Property Damage Only	13	16	3
	Non-Reportable	-	1	-
	Rear End	8	8	2
Collicion	Sideswipe	3	5	2
Tuno	Turning Movement	5	4	1
Type	Angle	1	-	-
	SMV Other	-	1	-
	Following Too Close	6	4	1
	Failed to yield right-of-way	6	1	-
	Improper Lane Change	2	1	-
	Speed too fast for condition	1	-	-
Driver	Lost Control	-	3	-
Action	Disobeyed Traffic Control	-	1	-
	Improper Turn	-	2	-
	Driving Properly	-	1	-
	Unknown	2	5	2
	Other	-	-	2
	Clear	12	14	4
Environment	Rain	3	2	1
	Snow	2	2	-
	Dawn	1	2	-
Light	Daylight	12	10	2
Light	Dusk	1	2	1
	Dark	3	4	2

The collision data presented in *Table 3* found that approximately 1 in 5 collisions that occurred along this section of Smyth Road resulted in a non-fatal injury, suggesting the majority of vehicles are travelling at low enough speeds so as not to cause bodily harm.

There were no identifiable collision patterns in the provided data which suggests there is not any specific area of concern. The main type of collision was rear-end (45%) followed by sideswipe (25%) and turning movement (25%). The most common type of driver action was following too close (28%) or failing to yield the right-of-way (18%). The majority of collisions occurred in clear weather (75%) during the daytime (60%).

# 2.1.3 Planned Conditions

# **Planned Projects**

Based on the City of Ottawa's 2013 Transportation Master Plan, the following transportation projects nearby the proposed development are scheduled to occur. Please note these projects are listed under the Road Network Concept plans and therefore are not anticipated to be finalized by the study's ultimate horizon year.



- Alta Vista Transportation Corridor
  - Bus / High Occupancy vehicle lanes and transit signal priority between Riverside Drive and Ottawa Health Sciences Centre.
  - New four-lane road between Nicholas Street / Highway 417 interchange and Riverside Drive.
  - New four-lane road (including two peak-period bus lanes) between the Ottawa Health Sciences Centre and Walkley Road.
- Smyth Road
  - Transit signal priority and queue jump lanes between Alta Vista Transportation Corridor and St. Laurent Boulevard.

### **Planned Developments**

Table 4 lists development applications that were identified on the City of Ottawa's Development Application Search Tool.

Location	Туре	Year
700 Coronation	4-storey, 35-unit residential building with 47 parking spaces.	Unknown
355 Everest	8-storey mid-rise apartment building with 101 units and 3 levels of underground parking with 108 spaces.	2020
1967 Riverside	Infill of the existing hospital campus with a continuum of care seniors community consisting of a Long-Term Care Home (256 beds) in Phase 1, and a 15-storey registered retirement home (270 beds) and shared amenity space in the second phase.	Unknown
200 Steamline	A seven-building high-rise development to be constructed in three	Phase 1: 2021
230 Steamline	phases. The first phase of the proposal consists of two buildings, 15	Phase 2: 2027
260 Steamline	and 22 storeys high, with a total of 414 units. When phase 3 is completed, a total of 1,890 units will be constructed.	Phase 3: 2031
1971 St-Laurent	Three 17-storey residential use buildings with at-grade residential and amenity space and public park space all fronting on St. Laurent Blvd. Parking is provided at-grade and within a proposed new multi-level above-ground parking garage.	Unknown

Table 4: Development Application Summary

# 2.2 Study Area and Time Periods

# 2.2.1 Study Area

The proposed study area for this proposed development is shown in *Figure 6* and includes the following nine (9) intersections:

- Ring Road (N-S) / Hospital Link Road (City jurisdiction)
- Ring Road (N-S) / CHEO Access Road
- Ring Road (N-S) / Ring Road (E-W)
- Ring Road (N-S) / Smyth Road (City jurisdiction)



- CHEO Access Road / Ring Road (E-W)
- Emergency Access Road / Ring Road (E-W)
- Parking Garage Entrance / Ring Road (E-W)
- General Hospital Access Road / Ring Road (E-W)
- General Hospital Access Road / Smyth Road (City jurisdiction)

### Figure 6: Study Intersections



# 2.2.2 Time Periods

The proposed scope of the transportation assessment includes the following analysis time periods:

- Weekday AM peak hour of roadway
- Weekday PM peak hour of roadway

# 2.2.3 Horizon Years

The scope of the transportation assessment proposes the following horizon years:

- 2022 existing conditions
- 2024 future background conditions
- 2024 total future conditions (parking garage build-out)

EXP Services Inc.



A future separate TIA that evaluates the 1D4C building impacts will be completed at a subsequent date. As the 1D4C building will be built within three years of the parking garage opening the 5-year future horizon period is not being analyzed as part of this TIA. That time period will be reflected on and addressed in the 1D4C building TIA.

# 2.3 Exemption Review

The Exemptions Review table from the City of Ottawa Transportation Impact Assessment Guidelines is summarized below in Table 5. Many elements are exempt as this TIA is only reviewing the parking garage. Another TIA will need to be completed when assessing the 1D4C building.

Module Exempt? Element **Exemption Considerations** (Yes/No) **Design Review Component** 4.1. Development 4.1.2. Circulation and Access Only required for site plans No Design 4.1.3. New Street Networks Only required for plans of subdivisions Yes 4.2. Parking 4.2.1. Parking Supply Only required for site plans No 4.2.2. Spillover Parking Only required for site plans where parking is 15% No below unconstrained demand Network Impact Component All Elements 4.5. Transportation Not required for site plans expected to have fewer Yes Demand than 60 employees and/or students on location at Management any given time 4.6.1. Adjacent 4.6. Neighbourhood Only required when the development Yes relies on local or collector streets for Traffic Management Neighbourhoods access and total volumes exceed ATM capacity thresholds 4.8. Network Only required when proposed development Yes Concept generates more than 200 person-trips during the peak hour in excess of the equivalent volume

permitted by establishing zoning

Table 5: Exemptions Review



# 3. Forecasting

# **3.1 Development Generated Travel Demand**

# 3.1.3 Trip Generation and Mode Shares

### **Trip Generation Rates**

Trip generation for this TIA is unique in that the number of staff parking passes available through CHEO will dictate the number of new trips being generated with the introduction of the parking garage. The remaining trips destined to the parking garage will include those form the displaced parking lots due to construction. These trips already exist and will form part of the background volumes. The share of staff verses visitors parking has been kept constant and transfer to the new garage so there will ne no new visitor parking either. Despite knowing the number of parking passes available, further information is still required to determine the distribution of those trips through out the day and within the peaks needs to be determined as does the split of trips into and out of the garage.

**Table 6** outlines the proposed rates that will be applied to the new parking pass staff. Rates were obtained from the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* 11<sup>th</sup> Edition. It was assumed Code 610 – Hospital would be the most appropriate proposed land use.

As previously stated, the parking garage is not anticipated to generate any new person trips. However, new trips will come from the 360 staff on an existing parking waitlist. These staff currently use an alternative mode (transit, vehicle passenger, cycle, or walk) or park their vehicles outside the hospital campus in the adjacent neighborhoods. With the construction of the parking garage, it is anticipated there will be a modal shift from transit / vehicle passenger /cycling / walking to driving as parking spaces in the parking garage will be filled by this waitlist.

Furthermore, the Ottawa General Hospital and CHEO have separate parking facilities with on-site signage that directs drivers to their own facilities. Visitors will follow the signs, so it is anticipated that no further trips will be generated. For staff parking, each of the two hospitals manage their own parking structure and they cater exclusively to their own staff. Given this, we do not see those attending OGH to use the CHEO parking structure and vice versa.

Table 6: Trip Generation Rates

Land Use Code	Employees	Peak Hour	Vehicle Trip Rate Per Employee	Entering	Exiting
Hospital (610)	360	AM	0.28	72%	28%
Hospital (610)	360	PM	0.28	30%	70%

### **Future Mode Share Targets**

The CHEO parking garage is located in the Inner Area as defined by the City of Ottawa's 2013 Transportation Master Plan. Based on information in the Transportation Master Plan, in 2011 the Inner Area had a transit mode share of 42% and 20% for trips going to and coming from the Inner Area. By 2031 this is expected to minorly increase (approx. 2%).

The City of Ottawa typically requires TIAs to develop mode share targets for proposed developments. However, mode share targets have not been developed for this TIA as a parking garage is only going to service vehicle trips. When a TIA is completed for the CHEO facility, mode share targets can be further explored.

### **Vehicle Trip Generation**

Using the rates noted in **Table 6**, EXP estimated the number of site-generated auto-trips. The estimated site-generated auto trips are shown in **Table 7**. Also, the City of Ottawa's typical method of calculating person-trips was not completed as the proposed development is a parking garage and will only serve auto trips.



Table 7: Site-Generated Trips

		Weekday AM Peak Hour		Wee	kday PM Pea	ak Hour	
Land Use Code	Trip Type	Total	In	Out	Total	In	Out
Hospital (610)	Auto Trips	101	73	28	101	30	71

While 360 staff are on the parking waitlist, the ITE auto trip rate was still applied to the number of employees as all vehicle trips are not anticipated to occur during the peak hours and are expected to be spread throughout the day.

# 3.1.2 Trip Distribution

The distribution of site-generated traffic entering/exiting the site was developed using traffic data from the intersections of Smyth Road / Ring Road (N-S), Smyth Road / General Hospital Access Road, and Hospital Link Road / Ring Road (N-S). Key movements from these traffic counts were used to develop the proportion of traffic entering/exiting the site from each direction. The trip distribution percentages for site-generated traffic are presented in *Table 8*.

### Table 8: Trip Distribution Percentages

	Intersection	Movement	AM Peak Hour %	PM Peak Hour %
	Smyth Road / Ring Road (N-S)	EBL	40	36
Entering	Smyth Road / General Hospital Access Road	WBR	47	55
	Hospital Link Road / Ring Road (N-S)	EBR	13	9
	Smyth Road / Ring Road (N-S)	SBR	16	45
Exiting	Smyth Road / General Hospital Access Road	SBL	64	45
	Hospital Link Road / Ring Road (N-S)	NBL	20	10

# 3.1.3 Trip Assignment

Site-generated trips were then assigned to the road network based on the proportions developed in *Section 3.1.2*. The AM and PM peak hour site-generated traffic volumes are presented in *Figure 7*.



Figure 7: AM and PM Peak Hour Site Generated Trips





# **3.2 Background Network Travel Demands 3.2.1 Transportation Network Plans**

Transportation network improvements are planned to occur near the development. However, as described in *Section 2.1.3*, these improvements are not anticipated to occur until well after the opening of the proposed parking garage. As such, adjustments to traffic volumes and the road network to account for these improvements have not been made within the TIA.

# 3.2.2 Background Growth

To develop the 2024 background traffic volumes, a 1% annual growth rate was applied to the 2022 traffic volumes.

To develop the 1% growth rate, the City of Ottawa's long-range model (Exhibit 2.11 of the 2013 TMP) was used to estimate the growth rate to/from the inner suburbs between 2011 and 2031.

It should be noted that the growth rate was only applied to through traffic along Smyth Road as traffic growth on the CHEO campus is largely based on the expansion of on-site services and facilities. *Figure 8* illustrates the Background 2024 AM and PM peak hour traffic volumes at the study area intersections. *Figure 9* illustrates the Total (Background + Site Generated) 2024 AM and PM peak hour traffic volumes.

# **3.2.3 Other Developments**

Developments that are currently under construction or in the development approval process are listed in **Table 4**. Due to their locations and after reviewing available TIAs conducted for the developments, the developments are not anticipated to have a significant impact on the study area identified in this TIA. As such, trips generated by these developments have not applied and have been considered as part of the background growth (i.e., the 1% annual growth rate applied).

# **3.2.4 Redistribution of Displaced Parking Trips**

With the parking garage and 1D4C displacing existing surface parking lots (Lot B and E), those lot trips were reassigned on the internal road network to the parking garage.

# **3.3 Demand Rationalization**

Demand rationalization is carried out when estimated future peak hour demand on the transportation network exceeds future capacity. Given the relatively small number of trips being added onto the road network in this TIA, it is not anticipated to be required. Demand rationalization has not been applied at this time but will be considered if appropriate as TDM measures could be effective on the behaviour of CHEO staff.



Figure 8: Background 2024 AM and PM Peak Hour Traffic Volumes





Figure 9: Total 2024 AM and PM Peak Hour Traffic Volumes





# 4. Analysis

# **4.1 Development Design**

The proposed development and its transportation network elements were reviewed in order to ensure that a safe and efficient design has been proposed that will encourage walking, cycling, and transit use.

Pedestrian facilities will be provided between the proposed parking garage building entrance and the CHEO hospital facilities. A connection to the sidewalk along Ring Road (E-W) will be provided, as shown on the site plan. Sidewalks will be depressed and continuous across the study area road network, in accordance with City standards.

Bicycle parking will also be facilitated at the parking garage. It will be located at the south side of the garage and will be in accordance wit the minimum requirement of the City's Zoning By-Law. A copy of the proposed site plan is included in *Appendix E*.

OC Transpo's service will not have its riders destined to the parking garage so the associated design features for transit do not come into play. However, if one feels they should be in play, the guidelines for peak period service to provide service within a five minute (400m) walk of the proposed development should be confirmed. Stops #1808, #7072, #1806, and #7234 are all located within 400m actual walking distance (measured using legal crosswalks) of the proposed development. As stated previously, the nearest bus stops to the subject site are described in *Section 2.1.2* and shown in *Figure 4*.

A review of the Transportation Demand Management (TDM) – Supportive Development Design and Infrastructure Checklist has been conducted. A copy of the TDM checklist is included in *Appendix F*. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

# 4.2 Parking

The parking garage itself does not generate a need for parking. It is the medical related buildings on campus that generate the parking needs. However, if one was to apply the by-law rates to identify parking requirements the following would come into play. The subject site is located in Area C on Schedule 1 and 1A of the City of Ottawa's Zoning By-Law. Minimum vehicular and bicycle parking rates for the proposed uses are identified and are summarized in the following **Table 9**.

### Table 9: Parking Requirement Per Zoning By-Law

Land Use	Rate	Units/GFA	Required			
Minimum Vehicle Parking						
Hospital	0.7 per 100 m <sup>2</sup> of gross floor area	33,500 m <sup>2</sup>	234.5			
		Proposed Vehicle Parking	1,050 Total			
Minimum Bicycle	Minimum Bicycle Parking					
Hospital	1 per 1000 m <sup>2</sup> of gross floor area	33,500 m <sup>2</sup>	33.5			
		Proposed Bicycle Parking	40 Total			

The proposed development will include 1,050 parking spaces in a parking garage accessible via Ring Road (E-W), meeting the minimum Zoning By-law 2008-250 Consolidation parking requirements. As the proposed supply of on-site parking meets or exceeds the By-law requirement, no further review of vehicular parking is required.

As was the case for vehicle parking, bicycle parking would not apply for a parking garage. However, if bicycle parking was calculated for the garage the proposed development will include a total of 40 bicycle parking spaces, meeting the minimum Zoning By-law 2008-250 Consolidation parking requirements for all land uses in the Site Plan.

The TIA guidelines identify the need to review spillover parking when the parking supply is 15% below demand. As the 1,050 proposed parking spaces are exceeded the required demand, a review of spillover parking is not required for the TIA.



# 4.3 Boundary Street Design

This section provides a review of the boundary streets using complete streets principles. The Multi-Modal Level of Service (MMLOS) guidelines produced by IBI Group in October 2015 were used to evaluate the levels of service for the boundary roadways for each mode of transportation. Schedule B of the City of Ottawa's Official Plan identifies entire study area road networks as being within the General Urban Area.

Targets for Pedestrians, Bicyclists, Transit, and Truck LOS for the boundary roadways adhere to those outlined in Exhibit 22 of the MMLOS guidelines. The boundary streets review evaluates the MMLOS for all boundary roadways based on existing conditions. *Table 10* summarizes the findings of the Segment MMLOS for Existing (2022) conditions.

Table 10: Segment MMLOS – Existing (2022) Conditions

	LEVEL OF SERVICE BY MODES					
Segments	Pedestrian (PLOS)	Bicyclist (BLOS)	Transit (TLOS)	Truck (TkLOS)		
Hospital Link Road	В	В	D	С		
CHEO Access Road	В	В	D	С		
Emergency Access Road	В	В	D	С		
General Hospital Access Road	В	В	D	С		
Smyth Road	С	В	D	В		
Ring Road (N-S)	В	В	D	С		
Ring Road (E-W)	F	В	E	С		
Target	C	В	D	Ε		

Given the development is an urban general area, the target level of service for pedestrians and bicyclist is high (PLOS 'C' and BLOS 'B'). As shown in **Table 10**, the target levels of service for pedestrians and transit are not met for Ring Road (E-W), however this is only a temporary condition and is expected to be significantly improved prior to the horizon year of this study with the development of the 1D4C building construction with surrounding road and landscape updates.. Detailed Segment MMLOS calculations can be found in **Appendix G**.

# **4.4 Access Intersections Design**

The proposed parking garage building will be served by one entry/exit (allowing for two lane egress / two lane ingress) along Ring Road (E-W).

Section 25 (c) of the City of Ottawa's Private Approach By-Law identifies a requirement for two-way accesses driveway to have a width no greater than 9 m, as measured at the street line. Section 107 (1)(a) of the Zoning By-Law identifies a minimum width requirement of 6.7 m for a two-way driveway to a parking lot. The proposed access on Ring Road is approximately 15 m in width, measured at the property line, thereby meeting the requirements.

Section 25 (o) of the Private Approach By-Law identifies a requirement to provide a minimum spacing of 3 m between the nearest edge of the private approach and the property line, as measured at the street line. Due to the proximity of the site to the intersection of the Ring Road and Emergency Access Road it was suggested that the access to the subject property be as far east of the Ring Road and Emergency Access Road intersection as possible.

Intersection sight distance (ISD) at the proposed access has been determined using the TAC Geometric Design Guide for Canadian Roads. The ISD for the access, for a design speed of 50 km/h (10 km/h above the posted speed limit), is as follows:

- Left Turn from Ring Road (E-W): 70 m
- Right Turn from Ring Road (E-W): 80 m

The required ISD for a passenger vehicle to turn left of right from the proposed access is shown in *Figure 10*.



Figure 10: Ring Road (E-W) Access Intersection Sight Distance



The stopping sight distance (SSD) requirement for a design speed of 50 km/h is 65 m for vehicles turning left or right at the access. There is slight horizontal curvature along Ring Road (E-W) east of the proposed building entrance, however, as demonstrated in *Figure 15*, the ISD is not impacted. As such, it can be found that the required ISD and SSD at the access are adequate. Available sightlines are within recommended guidelines to allow safe all directional access to the development.

# 4.5 Transit

The transit trips are not anticipated to be generated by the subject parking garage building specifically. As described in *Section 2.1.2*, OC Transpo routes #45 and #55 travel on 15-minute headways during the weekdays, 30-minute headways during the weekend. The existing transit services in the study area are anticipated to be sufficient to accommodate the demand from the proposed development.

# **4.6 Intersection Design**

# 4.6.3 Existing Intersection MMLOS Analysis

This section provides a review of the signalized study area intersections using complete streets principles. The MMLOS guidelines produced by IBI Group in October 2015 were used to evaluate the LOS of the signalized study area intersections for each mode of transportation. The policy related area types for the study area intersections are described as follows:

- Smyth Road/Ring Road (N-S): General Urban Area;
- Smyth Road/General Hospital Access Road: General Urban Area.

The following **Table 11** summarizes the findings of the MMLOS intersection analysis. Detailed intersection MMLOS calculations are included in **Appendix H**.



### Table 11: Intersection MMLOS Summary

	LEVEL OF SERVICE BY MODES						
Intersection	Pedestrian (PLOS)	Bicyclist (BLOS)	Transit (TLOS)	Truck (TkLOS)			
Smyth Road/Ring Road (N-S)	D	D	F	F			
Target	С	В	D	D			
Smyth Road/General Hospital Access Road	D	D	F	А			
Target	С	В	D	D			

### Smyth Road/Ring Road (N-S)

There are limited opportunities to improve the current PLOS of each approach without reducing the number of travel lanes or restricting turning movements. The level of comfort can be increased by implementing zebra-striped crosswalks at each approach. There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

The BLOS is dependent on the number of travel lanes and operating speed. All approaches do not meet the target BLOS of C. Implementation of MUP on both north and south side on Smyth Road will enhance the cyclist user's convenience and this can be improved to the target of BLOS B.

The north approach does not meet the target TLOS of D. The TLOS is based on the average signal delay experienced by transit vehicles at each approach. The poor TLOS is a result of the average delay which includes travel time from end of queue to entering the intersection, and this will exceed more than 50 seconds at north approach. Reduction of traffic demands at the intersection would improve this level of service as would implementation of some form of transit signal priority such as a queue jump lane. The implementation of continuous bus lanes on Smyth Road would also improve the TLOS beyond the target TLOS of D.

The TkLOS is dependent on the number of lanes in each direction and the curb lane width. TkLOS could be improved to the target of D if the wider turning radii is provided at the south approach.

### Smyth Road/General Hospital Access Road

There is limited opportunity in improving the delay score without incurring major delays for vehicles. The east approach has a divided cross-section with median. Regardless of the median on the east approach, there are limited opportunities to improve the current PLOS without reducing the number of travel lanes or restricting turning movements. The level of comfort can be increased by implementing zebra-striped crosswalks on each approach.

As this intersection is a T-intersection, there is no space available to implement a two-stage left-turn bike box for cyclists coming from the west approach. Two-stage left turn bike boxes can be implemented at the north and east approaches. A jug handle and crossride for cyclists coming from the west approach could be implemented along with the installation of a bicycle traffic signal. The implementation of a higher order cycling facility (e.g. cycle track) would improve the BLOS of this intersection based on right turn characteristics.

The north approach does not meet the target TLOS of D. The TLOS is based on the average signal delay experienced by transit vehicles on each approach. The poor TLOS is a result of the average delay which includes travel time from end of queue to entering the intersection, and this will exceed more than 40 seconds on the north approach. Reduction of traffic demands at the intersection would improve this level of service as would the implementation of some form of transit signal priority such as a queue jump lane. The implementation of continuous bus lanes on Smyth Road would also improve the TLOS beyond the target TLOS of D.

Smyth Road and General Hospital Access Road intersection will meet the City's target, operating with TkLOS of A.



# **4.9.2 Background Intersection Operations**

Intersection capacity analysis has been completed for the 2024 background traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl<sup>1</sup>, Peak Hour Factor: 1.0 for future conditions). *Table 13* summarizes the results of the Synchro analysis for the 2024 background traffic conditions. Detailed Synchro reports are included in *Appendix I*.

### Table 12: 2024 Background Intersection Operations

	AM Peak Hour					PM Peak Hour				
Intersection	Critical Movement	Max v/c	LOS	Delay (s)	95 <sup>th</sup> Queue (m)	Critical Movement	Max v/c	LOS	Delay (s)	95 <sup>th</sup> Queue (m)
Hospital Link Road/Ring Road (N-S)	Eastbound through- right	0.54	В	12	-	Westbound left-through	0.40	В	11	-
CHEO Access Road/Ring Road (N-S)	Northbound left- through- right	0.81	С	23	-	Southbound left- through- right	0.81	С	24	-
Ring Road (E-W)/Ring Road (N-S)	Westbound left-right	0.75	F	57	40	Westbound left-right	0.75	E	39	44
Smyth Road/Ring Road (N-S)	Eastbound left- through- right	0.89	В	15	195	Southbound left	0.58	D	50	45
CHEO Access Road/Ring Road (E-W)	Southbound left-right	0.11	А	0	0	Westbound through- right	0.16	А	0	0
Emergency Access Road/Ring Road (E-W)	Westbound through- right	0.08	А	0	0	Westbound through- right	0.11	А	0	0
General Hospital Access Road/Ring Road (E-W)	Westbound left- through- right	0.43	В	15	-	Westbound left- through- right	1.16	F <sup>2</sup>	119	-
Smyth Road/General Hospital Access Road	Southbound left	0.56	D	54	34	Southbound left	0.69	D	46	56
Parking Garage Access/Ring Road (E-W)	Southbound left	0.20	С	16	5	Southbound left	0.18	В	13	5

The three intersections under the City's jurisdiction are the focus of this assessment and are highlighted in bold print in **Table 13**. All have been found to operate at an acceptable level and within City standards. Of the remaining intersections assessed, all which fall on the hospital road network, only the westbound left-right turning movement at the Ring Road (E-W)/ Ring Road (N-S) and the right-through-left movement at the General Hospital Access Road/Ring Road (E-W) operate with a LOS F during the AM peak hour and PM peak hour respectively. Although these two have higher delay and queuing associate with them, these negative impacts do not affect the operations of the traffic signal on Smyth Road.

All other intersections are anticipated to operate with a LOS E or better during the weekday AM and PM peak hours.

<sup>&</sup>lt;sup>1</sup> Vehicles per hour per lane

<sup>&</sup>lt;sup>2</sup> Due to the limited storage at this intersection, Northbound traffic is currently uncontrolled to provide a priority to inbound movements towards the emergency department. However, there is no way to force Synchro to provide the results for an unusual level of intersection control, three-way stops control cannot be coded for a four-way intersection. As such, all-way (four-way) stops control was assumed/modelled in Synchro to provide results, which may not be an accurate result.



It is noted that some existing trips at both Parking Lot B and Lot E have re-routed to the Parking Garage Access. Assumptions follow below:

- 80% of traffic to/from Ring Road (E-W) would be re-routed to Parking Garage Access, with the remaining 20% of traffic proceeding to/from Emergency Access Road.
- 70% of traffic to/from CHEO Access Road would be re-routed to Parking Garage Access, with the remaining 30% of traffic proceeding to/from the main hospital building (CHEO).

This is a relatively small number of vehicles that appear during both peak hours, it would have minimal impacts on the existing traffic and does not have significant impacts to the study area intersections.

# **4.9.3 Total Intersection Operations**

Intersection capacity analysis has been completed for the 2024 total traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl, Peak Hour Factor: 1.0 for future conditions). *Table 14* summarizes the results of the Synchro analysis for the 2024 total traffic conditions. Detailed Synchro reports are included in *Appendix I*.

### Table 13: 2024 Total Intersection Operations

	AM Peak Hour						PM Peak Hour			
Intersection	Critical Movement	Max v/c	LOS	Delay (s)	95 <sup>th</sup> Queue (m)	Critical Movement	Max v/c	LOS	Delay (s)	95 <sup>th</sup> Queue (m)
Hospital Link Road/Ring Road (N-S)	Eastbound through- right	0.56	В	13	-	Westbound left-through	0.40	В	11	-
CHEO Access Road/Ring Road (N-S)	Northbound left- through- right	0.83	С	24	-	Southbound left- through- right	0.83	С	25	-
Ring Road (E-W)/Ring Road (N-S)	Westbound left-right	0.85	F	74	49	Westbound left-right	0.81	E	48	54
Smyth Road/Ring Road (N-S)	Eastbound left- through- right	0.96	В	17	205	Southbound left	0.57	D	49	45
CHEO Access Road/Ring Road (E-W)	Westbound through- right	0.12	А	0	0	Westbound through- right	0.17	А	0	0
Emergency Access Road/Ring Road (E-W)	Westbound through- right	0.09	A	0	0	Westbound through- right	0.11	А	0	0
General Hospital Access Road/Ring Road (E-W)	Westbound left- through- right	0.44	С	15	-	Westbound left- through- right	1.23	F <sup>3</sup>	144	-
Smyth Road/General Hospital Access Road	Southbound left	0.57	D	53	36	Southbound left	0.69	D	45	58
Parking Garage Access/Ring Road (E-W)	Southbound left	0.24	В	20	7	Southbound left	0.24	В	14	7

<sup>&</sup>lt;sup>3</sup> As noted above in section 4.9.2, Synchro does not provide the results for an unusual level of intersection control. As such, all-way (four-way) stops control was assumed/modelled in Synchro to provide results, which may not be an accurate result.



As with the 2024 Background Conditions the three main City intersections operate at and acceptable levels of service when the parking trip are included in the traffic mix. Also, for the 2024 total traffic conditions, the westbound turning movement at the Ring Road (E-W)/ Ring Road (N-S) intersection continues to operate with a LOS F during the AM peak hour as does the right-through-left movement at the General Hospital Access Road/Ring Road (E-W) operate with a LOS F during the AM peak hour and PM peak hour respectively.

All other intersections are anticipated to operate with a LOS E or better during the weekday AM and PM peak hours under 2024 total traffic conditions. The site trips added to the road network will not have a significant impact on the traffic operations. Additionally, all unsignalized intersection movements are expected to operate within capacity and with acceptable delays.



# 5. Conclusion and Recommendations

Based on the foregoing, the conclusions and recommendation of this TIA can be summarized as follows:

# **Development Design and Parking**

- Pedestrian facilities will be provided between the parking garage building entrance and existing CHEO facilities. A connection to the sidewalk along Ring Road (E-W) will be provided, as shown on the site plan. Sidewalks will be continuous and depressed across the study area.
- OC Transpo stops #1808, #7072, #1806, and #7234 are located within a 400 m walking distance of the proposed parking garage entrance.
- With the 1050 proposed vehicular parking spaces, 40 proposed bicycle parking spaces will meet the requirement of the City of Ottawa's Zoning By-Law.

# Boundary Street MMLOS

 All boundary streets within the study area meet the target segment level of service, with the exception of Ring Road (E-W). However, given the proposed site plan with its implementation of new sidewalks across the study area, this is only a temporary condition and will be significantly improved in the near future with the construction of the 1D4C building and surrounding landscape.

# Access Design

- The proposed parking garage building will be served by one all-movement access along Ring Road (E-W). This access will be approximately 15 m in width and will meet all requirements of the City's Private Approach By-Law.
- Available sightlines are within recommended guidelines to allow safe all directional access to the proposed development.

# <u>Transit</u>

• The existing transit services in the study area are anticipated to be sufficient to accommodate the demand from the proposed development.

# Intersection MMLOS

- The Smyth Road/Ring Road (N-S) intersection does not meet the target PLOS, BLOS, TLOS, or TkLOS.
- The Smyth Road/General Hospital Access Road intersection achieves the target TkLOS, however does not meet the target PLOS, BLOS, or TLOS.

# **Background Traffic Conditions**

- A 1% growth rate was applied to the study area road network.
- Under 2024 background traffic conditions, all intersections are anticipated to operate with a LOS D or better except the westbound movement at the intersection of General Hospital Access Road/Ring Road (E-W) during PM peak hour and the, the westbound turning movement at the Ring Road (E-W)/ Ring Road (N-S) intersection continues to operate with a LOS F during the AM peak hour. However, these will not affect the City intersection operations along Smyth Road.

# **Total Traffic Conditions**

- A 1% growth rate was applied to the study area road network.
- Under 2024 total traffic conditions, all intersections are anticipated to operate with a LOS D or better except the
  westbound movement at the intersection of General Hospital Access Road/Ring Road (E-W) during PM peak hour and
  the westbound turning movement at the Ring Road (E-W)/ Ring Road (N-S) intersection which continues to operate
  with a LOS F during the AM peak hour. However, these will not affect the City intersection operations along Smyth
  Road. It is also noted that traffic volumes on the westbound approach to the General Hospital Access Road/Ring Road
  (E-W) intersection are not related to the proposed development and represent existing background traffic conditions
  and anticipated traffic growth on the overall hospital campus.



In summary, no changes to the existing intersections within the study area are required to serve the proposed development of a 1050 space parking garage. Traffic growth expected from servicing the induced vehicular demand is anticipated to be modest and accommodated through the existing transportation infrastructure.



Appendix A – TIA Screening Form



# **TIA Plan Reports**

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

# CERTIFICATION



I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;



I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;



I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and



I am either a licensed<sup>1</sup> or registered<sup>2</sup> professional in good standing, whose field of expertise

is either transportation engineering

or transportation planning .

<sup>1,2</sup> License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

City Of Ottawa Infrastructure Services and Community Sustainability Planning and Growth Management 110 Laurier Avenue West, 4th fl. Ottawa, ON K1P 1J1 Tel. : 613-580-2424 Fax: 613-560-6006

Dated at Ottawa	this 9	day of	 20 22
(City)			
Name : Greg Kent			
Professional title: Manager Traffic	Engineerir	ng	
11/			

Signature of individual certifier that s/he meets the above criteria

Office Contact	Information (Please Print)
Address:	
City / Postal Code	e:
Telephone / Exte	nsion:
E-Mail Address:	

# Stamp



# City of Ottawa 2017 TIA Guidelines Screening Form

# 1. Description of Proposed Development

Municipal Address	401 Smyth Road
Description of Location	NW corner of the Ring Road/General Hospital Access Intersection.
Land Use Classification	Parking Garage
Development Size (units)	N/A
Development Size (m <sup>2</sup> )	1,050 space Parking Garage; 33,519 m2
Number of Accesses and Locations	1 Access on Ring Road
Phase of Development	Phase 1 of 2 (there will be additional related to 1Door4Care).
Buildout Year	Parking Garage built and occupied by 2024.

# If available, please attach a sketch of the development or site plan to this form.

# 2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m <sup>2</sup>
Industrial	5,000 m <sup>2</sup>
Fast-food restaurant or coffee shop	100 m <sup>2</sup>
Destination retail	1,000 m <sup>2</sup>
Gas station or convenience market	75 m <sup>2</sup>

\* If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.

# If the proposed development size is greater than the sizes identified above, <u>the Trip Generation</u> <u>Trigger is satisfied.</u>

Parking Garage with 1,050 parking spaces. The proposed development will generate more than 60 new person trips due to an existing latent parking demand consisting of 360 staff. The garage will house displaced surface parking spaces on the hospital campus due to new building development as well as facilitate the latent demand.

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# 3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		$\mathbf{X}$
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		$\times$

\*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

# If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

# 4. Safety Triggers Are posted speed limits on a boundary street are 80 km/hr or greater? X Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway? X Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? X Is the proposed driveway within auxiliary lanes of an intersection? X Does the proposed driveway make use of an existing median break that serves an existing site? X Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development? X Does the development include a drive-thru facility? X

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

# 5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	$\mathbf{X}$	
Does the development satisfy the Location Trigger?		X
Does the development satisfy the Safety Trigger?		X

If none of the triggers are satisfied, <u>the TIA Study is complete</u>. If one or more of the triggers is satisfied, <u>the TIA Study must continue into the next stage</u> (Screening and Scoping).



# Appendix B – City of Ottawa and Stantec Turning Movement Data



**Turning Movement Count - Study Results** 

SMYTH RD @ SOUTH HAVEN PL/GENERAL HOSPITAL ENTRANCE W




# Turning Movement Count - Study Results





## Turning Movement Count - Peak Hour Diagram SMYTH RD @ SOUTH HAVEN PL/GENERAL HOSPITAL ENTRANCE W



Comments



## Turning Movement Count - Peak Hour Diagram SMYTH RD @ SOUTH HAVEN PL/GENERAL HOSPITAL ENTRANCE W



Comments



## Turning Movement Count - Peak Hour Diagram SMYTH RD @ SOUTH HAVEN PL/GENERAL HOSPITAL ENTRANCE W



Comments



# Turning Movement Count - Study Results

# SMYTH RD @ SOUTH HAVEN PL/GENERAL HOSPITAL ENTRANCE W

Survey Da	ate: T	uesda	y, Oct	tober 0	4, 202	2						wo	No:			40	590		
Start Tim	<b>1e:</b> 0	7:00										Devi	ce:			Mio	vision		
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	Nor	thbou	nd		So	uthbou	und			E	astbou	Ind		V	/estbo	und			
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	4	0	1	5	28	0	99	127	132	337	713	1	1051	2	442	102	546	1597	1729
08:00 09:00	3	1	3	7	26	0	107	133	140	324	694	5	1023	2	564	77	643	1666	1806
09:00 10:00	3	0	1	4	22	0	129	151	155	201	511	3	715	3	401	34	438	1153	1308
11:30 12:30	3	0	3	6	28	0	152	180	186	111	428	4	543	2	465	15	482	1025	1211
12:30 13:30	3	0	3	6	31	0	150	181	187	147	407	4	558	1	441	23	465	1023	1210
15:00 16:00	5	0	5	10	119	0	296	415	425	113	551	6	670	3	822	23	848	1518	1943
16:00 17:00	4	0	1	5	102	1	258	361	366	67	469	2	538	2	697	3	702	1240	1606
17:00 18:00	3	0	2	5	38	0	171	209	214	56	464	10	530	0	578	13	591	1121	1335
Sub Total	28	1	19	48	394	1	1362	1757	1805	1356	4237	35	5628	15	4410	290	4715	10343	12148
U Turns				0				1	1				0				0	0	1
Total	28	1	19	48	394	1	1362	1758	1806	1356	4237	35	5628	15	4410	290	4715	10343	12149
EQ 12Hr	39	1	26	67	548	1	1893	2444	2510	1885	5889	49	7823	21	6130	403	6554	14377	16887
Note: These v	alues ar	e calcul	ated by	y multipl	ying the	totals b	by the a	ppropriate	e expans	sion fac	tor.			1.39					
AVG 12Hr	35	1	23	60	493	2	2232	2200	2259	1696	5300	44	7041	19	5517	363	5899	12939	15198
Note: These v	olumes	are calc	ulated	by multi	plying th	ne Equiv	valent 1	2 hr. tota	ls by the	AADT	factor.			.90					
AVG 24Hr	46	1	30	79	646	3	2924	2882	2959	2222	6943	58	9224	25	7227	476	7728	16950	19909
Note: These v	olumes	are calo	ulated	by multi	plying th	ne Avera	age Dai	ly 12 hr. 1	totals by	12 to 2	4 expan	sion fact	or.	1.31					

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.



#### Survey Date: Tuesday, October 04, 2022 WO No: Start Time: 07:00 **Device:** Miovision **Full Study Cyclist Volume** SOUTH HAVEN PL/GENERAL HOSPITAL SMYTH RD **ENTRANCE W** Eastbound Southbound Street Total **Time Period** Northbound Westbound Street Total **Grand Total** 07:00 07:15 07:15 07:30 07:30 07:45 07:45 08:00 08:00 08:15 08:15 08:30 08:30 08:45 08:45 09:00 09:00 09:15 09:15 09:30 09:30 09:45 09:45 10:00 11:30 11:45 11:45 12:00 12:00 12:15 12:15 12:30 12:30 12:45 12:45 13:00 13:00 13:15 13:15 13:30 15:00 15:15 15:15 15:30 15:30 15:45 15:45 16:00 16:00 16:15 16:15 16:30 16:30 16:45 16:45 17:00 17:00 17:15 17:15 17:30 17:30 17:45 17:45 18:00 Total



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	HC	SPITAL ENTRAN	CEW				
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	1	1	2	1	0	1	3
07:30 07:45	1	2	3	0	1	1	4
07:45 08:00	0	7	7	0	2	2	9
08:00 08:15	1	1	2	0	0	0	2
08:15 08:30	0	1	1	0	3	3	4
08:30 08:45	0	3	3	0	2	2	5
08:45 09:00	0	2	2	0	1	1	3
09:00 09:15	0	1	1	0	0	0	1
09:15 09:30	0	2	2	1	2	3	5
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	1	2	3	0	0	0	3
11:45 12:00	0	2	2	0	1	1	3
12:00 12:15	0	3	3	0	10	10	13
12:15 12:30	0	5	5	1	9	10	15
12:30 12:45	1	5	6	0	1	1	7
12:45 13:00	0	1	1	0	5	5	6
13:00 13:15	2	3	5	0	2	2	7
13:15 13:30	0	5	5	0	1	1	6
15:00 15:15	0	4	4	0	0	0	4
15:15 15:30	0	1	1	0	0	0	1
15:30 15:45	0	1	1	0	0	0	1
15:45 16:00	2	5	7	1	4	5	12
16:00 16:15	2	3	5	2	2	4	9
16:15 16:30	2	5	7	0	0	0	7
16:30 16:45	0	1	1	0	3	3	4
16:45 17:00	2	2	4	1	1	2	6
17:00 17:15	0	3	3	0	0	0	3
17:15 17:30	0	7	7	1	0	1	8
17:30 17:45	0	1	1	0	3	3	4
17:45 18:00	0	2	2	0	0	0	2
Total	15	81	96	8	53	61	157



Survey Date	: Tu	Jesda	ıy, Oct	tober	04, 2	022							WO	No:			4	0590	
Start Time:	07	7:00											Dev	ice:			Mie	ovisior	n
						F	ull S	tud?		avv	Voł	nicle	e						
	S	ОПТР	ч нал	FN P	I /GEI			nuu	yiic	avy,	VCI	SM	, <b>3</b> Лутн	BD					
	0	HOS	PITAL	ENT	RAN							01							
	No	orthbou	und		Sc	outhbou	Ind			E	astbour	nd		W	estbour	nd			
Time Period	IТ	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	Е ТОТ	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	0	0	0	0	0	0	1	3	3	1	2	0	6	0	2	1	5	11	7
07:15 07:30	0	0	0	0	0	0	1	3	3	1	2	0	6	0	2	1	5	11	7
07:30 07:45	0	0	0	0	1	0	2	6	6	1	3	0	8	0	2	2	8	16	11
07:45 08:00	0	0	0	0	0	0	3	4	4	1	4	0	9	0	1	0	5	14	9
08:00 08:15	0	0	0	0	0	0	0	0	0	0	3	0	8	0	5	0	8	16	8
08:15 08:30	0	0	0	0	0	0	3	9	9	5	5	0	22	0	9	1	15	37	23
08:30 08:45	0	0	0	0	1	0	2	8	8	4	4	0	15	0	5	1	11	26	17
08:45 09:00	0	0	0	0	1	0	4	6	6	0	7	0	18	0	7	1	16	34	20
09:00 09:15	0	0	0	0	1	0	2	5	5	2	5	0	14	0	5	0	11	25	15
09:15 09:30	0	0	0	0	0	0	1	4	4	2	3	0	10	0	4	1	8	18	11
09:30 09:45	0	0	0	0	0	0	1	2	2	1	2	0	6	0	2	0	4	10	6
09:45 10:00	0	0	0	0	1	0	2	6	6	2	6	0	13	0	3	1	11	24	15
11:30 11:45	0	0	0	0	0	0	3	6	6	3	1	0	13	0	6	0	7	20	13
11:45 12:00	0	0	0	0	1	0	2	4	4	1	5	0	12	0	4	0	10	22	13
12:00 12:15	0	0	0	0	1	0	2	6	6	2	2	0	12	0	6	1	10	22	14
12:15 12:30	0	0	0	0	0	0	3	6	6	2	3	0	9	0	1	1	5	14	10
12:30 12:45	0	0	0	0	1	0	1	3	3	1	6	0	14	0	6	0	13	27	15
12:45 13:00	0	0	0	0	1	0	4	10	10	5	3	0	13	0	1	0	5	18	14
13:00 13:15	0	0	0	0	0	0	3	4	4	1	7	0	15	0	4	0	11	26	15
13:15 13:30	0	0	0	0	0	0	2	4	4	2	1	0	5	0	0	0	1	6	5
15:00 15:15	0	0	0	0	0	0	2	4	4	2	4	0	12	0	4	0	8	20	12
15:15 15:30	0	0	0	0	3	0	1	4	4	0	7	0	11	0	3	0	13	24	14
15:30 15:45	0	0	0	0	0	0	1	2	2	1	3	0	8	0	3	0	6	14	8
15:45 16:00	0	0	0	0	0	0	0	1	1	1	5	0	13	0	7	0	12	25	13
16:00 16:15	0	0	0	0	0	0	1	2	2	1	5	0	9	0	2	0	7	16	9
16:15 16:30	0	0	0	0	1	0	2	4	4	1	5	0	15	0	7	0	13	28	16
16:30 16:45	0	0	0	0	0	0	2	3	3	1	3	0	10	0	4	0	7	17	10
16:45 17:00	0	0	0	0	0	0	0	2	2	2	6	0	9	0	1	0	7	16	9
17:00 17:15	0	0	0	0	0	0	3	4	4	1	1	0	5	0	0	0	1	6	5
17:15 17:30	0	0	0	0	0	0	1	1	1	0	3	0	5	0	1	0	4	9	5
17:30 17:45	0	0	0	0	0	0	1	2	2	1	4	0	9	0	3	0	7	16	9
17:45 18:00	0	0	0	0	0	0	3	6	6	3	5	0	13	0	2	0	7	20	13
Total: None	0	0	0	0	13	0	59	134	134	51	125	0	347	0	112	11	261	608	371



Survey D	Date: Tuesda	ay, Octobe	er 04, 2022		wo	) No:	40590
Start Tir	<b>me:</b> 07:00				De	vice:	Miovision
			Full S	tudy 15 Mir	ute II-Turr	Total	
				L/GENERAL RANCE W	3		
	Time	Pariod	Northbound	Southbound	Eastbound	Westbound	Total
		chica	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	lotal
	07:00	07:15	0	0	0	0	0
	07:15	07:30	0	0	0	0	0
	07:30	07:45	0	1	0	0	1
	07:45	08:00	0	0	0	0	0
	08:00	08:15	0	0	0	0	0
	08:15	08:30	0	0	0	0	0
	08:30	08:45	0	0	0	0	0
	08:45	09:00	0	0	0	0	0
	09:00	09:15	0	0	0	0	0
	09:15	09:30	0	0	0	0	0
	09:30	09:45	0	0	0	0	0
	09:45	10:00	0	0	0	0	0
	11:30	11:45	0	0	0	0	0
	11:45	12:00	0	0	0	0	0
	12:00	12:15	0	0	0	0	0
	12:15	12:30	0	0	0	0	0
	12:30	12:45	0	0	0	0	0
	12:45	13:00	0	0	0	0	0
	13:00	13:15	0	0	0	0	0
	13:15	13:30	0	0	0	0	0
	15:00	15:15	0	0	0	0	0
	15:15	15:30	0	0	0	0	0
	15:30	15:45	0	0	0	0	0
	15:45	16:00	0	0	0	0	0
	16:00	16:15	0	0	0	0	0
	16:15	16:30	0	0	0	0	0
	16:30	16:45	0	0	0	0	0
	16:45	17:00	0	0	0	0	0
	17:00	17:15	0	0	0	0	0
	17:15	17:30	0	0	0	0	0
	17:30	17:45	0	0	0	0	0
	17:45	18:00	0	0	0	0	0
	To	otal	0	1	0	0	1



**Transportation Services - Traffic Services** Ottawa

### **Turning Movement Count - Study Results**

Survey Da	ate: M	/ednes	sday,	Decen	nber 1	1, 201	9					wo	No:			39	229		
Start Tim	ie: 0	7:00										Dev	ice:			Mio	vision		
				F	Full S	Stud	ly Sı	umma	ary (	B HF	R Sta	nda	rd)						
Survey Da	te: \	Nedne	esday,	Dece	mber 1	1,		1	Fotal C	bser	ved U-	Turns					AAD	T Facto	or
	2	2019					1	Northbour	nd: 0		South	hbound:	0				1.20		
								Eastbour	nd: 0		Wes	tbound:	1				1.39		
		GE	NERA	L HO	SPITAL	E						SI	MYTH	RD					
	No	rthbou	nd	ND	So	uthbo	und	60	et D	E	astbou	ind		v	Vestbo	und	WD	eto	<b>6</b>
Period	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	LT	ST	RT	TOT	LT	ST	RT	TOT	TOT	Tota
07:00 08:00	0	0	0	0	122	0	173	295	295	396	399	0	795	0	579	394	973	1768	206
08:00 09:00	0	0	0	0	93	0	155	248	248	354	440	0	794	0	680	381	1061	1855	210
09:00 10:00	0	0	0	0	143	0	156	299	299	294	378	0	672	0	400	240	640	1312	161
11:30 12:30	0	0	0	0	162	0	256	418	418	183	391	0	574	0	369	197	566	1140	155
12:30 13:30	0	0	0	0	163	0	201	364	364	239	353	0	592	0	358	238	596	1188	155
15:00 16:00	0	0	0	0	286	0	371	657	657	162	641	0	803	0	582	149	731	1534	219
16:00 17:00	0	0	0	0	307	0	303	610	610	117	756	0	873	0	458	126	584	1457	206
17:00 18:00	0	0	0	0	148	0	238	386	386	87	582	0	669	0	370	90	460	1129	1515
Sub Total	0	0	0	0	1424	0	1853	3277	3277	1832	3940	0	5772	0	3796	1815	5611	11383	14660
U Turns				0				0	0				0				1	1	1
Total	0	0	0	0	1424	0	1853	3277	3277	1832	3940	0	5772	0	3796	1815	5612	11384	1466
EQ 12Hr	0	0	0	0	1979	0	2576	4555	4555	2546	5477	0	8023	0	5276	2523	7801	15824	2037
Note: These v	alues a	re calcu	lated by	y multipl	ying the	totals t	by the a	ppropriat	e expans	sion fac	tor.			1.39					
AVG 12Hr	0	0	0	0	1979	0	2576	4555	4555	2546	5477	0	8023	0	5276	2523	7801	15824	2037
NOTE: THESE V	oiumes	are cak	uated	by multi	piying th	ie Edni.	valent 1	2 nr. tota	is by the	AADT	ractor.			1					

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown

Ottawa	Tra
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#### nsportation Services - Traffic Services

#### **Turning Movement Count - Study Results** SMYTH RD @ GENERAL HOSPITAL E

Surve	ey Dat	e: w	edne	esday,	Dece	mber	11, 2	019						**0	140.			3	9229	
Star	t Time	: 07	7:00											Devi	ice:			Mie	ovisio	n
							E	ull S	tud	v 1!	5 Mi	nute	Inc	rem	ent	s				
			GE	NERA	LHO	SPITA	LE			,			SN	AYTH	RD	-				
		N	arthha	und		S	uthhou	ind			E	aethouu	ad a		· · ·	aethour	~			
		140	biulbo	unu	N	00	unbou	ing	s	STR	-	astooui	iu -	F		catboui		w	STR	Grand
Time F	Period	LT	ST	RT	тот	LT	ST	RT	тот	TOT	LT	ST	RT	тот	LT	ST	RT	тот	TOT	Total
07:00	07:15	0	0	0	0	23	0	33	56	241	111	68	0	179	0	121	74	195	241	430
07:15	07:30	0	0	0	0	31	0	41	72	257	91	109	0	200	0	147	94	241	257	513
07:30	07:45	0	0	0	0	36	0	58	94	284	92	108	0	200	0	165	98	263	284	557
07:45	08:00	0	0	0	0	32	0	41	73	303	102	114	0	216	0	146	128	274	303	563
08:00	08:15	0	0	0	0	24	0	38	62	263	87	91	0	178	0	167	114	281	263	521
08:15	08:30	0	0	0	0	21	0	37	58	223	87	102	0	189	0	189	78	267	223	514
08:30	08:45	0	0	0	0	23	0	40	63	255	80	107	0	187	0	170	112	282	255	532
08:45	09:00	0	0	0	0	25	0	40	65	242	100	140	0	240	0	154	77	231	242	536
09:00	09:15	0	0	0	0	22	0	38	60	194	75	122	0	197	0	127	59	186	194	443
09:15	09:30	0	0	0	0	38	0	39	77	212	74	78	0	152	0	96	61	157	212	386
09:30	09:45	0	0	0	0	38	0	28	66	202	73	83	0	156	0	86	63	149	202	371
09:45	10:00	0	0	0	0	45	0	51	96	225	72	95	0	167	0	91	57	149	225	412
11:30	11:45	0	0	0	0	41	0	56	97	168	28	98	0	126	0	102	43	145	168	368
11:45	12:00	0	0	0	0	41	0	70	111	210	46	93	0	139	0	84	53	137	210	387
12:00	12:15	0	0	0	0	47	0	64	111	213	57	98	0	155	0	98	45	143	213	409
12:15	12:30	0	0	0	0	33	0	66	99	207	52	102	0	154	0	85	56	141	207	394
12:30	12:45	0	0	0	0	49	0	50	99	235	67	92	0	159	0	81	69	150	235	408
12:45	13:00	0	0	0	0	40	0	51	91	204	54	91	0	145	0	96	59	155	204	391
13:00	13:15	0	0	0	0	39	0	40	79	191	53	87	0	140	0	86	59	145	191	364
13:15	13:30	0	0	0	0	35	0	60	95	211	65	83	0	148	0	95	51	146	211	389
15:00	15:15	0	0	0	0	63	0	99	162	251	54	137	0	191	0	149	35	184	251	537
15:15	15:30	0	0	0	0	72	0	79	151	228	35	142	0	177	0	150	42	192	228	520
15:30	15:45	0	0	0	0	70	0	93	163	235	39	198	0	237	0	127	33	160	235	560
15:45	16:00	0	0	0	0	81	0	100	181	254	34	164	0	198	0	156	39	195	254	574
16:00	16:15	0	0	0	0	83	0	98	181	242	21	192	0	213	0	142	40	182	242	576
16:15	16:30	0	0	0	0	96	0	78	174	239	36	222	0	258	0	108	29	137	239	569
16:30	16:45	0	0	0	0	60	0	65	125	182	30	167	0	197	0	105	27	132	182	454
16:45	17:00	0	0	0	0	68	0	62	130	190	30	175	0	205	0	103	30	133	190	468
17.00	17.15	0	0	0	0	42	0	64	106	153	20	150	0	170	0	104	27	131	153	407
17.15	17:30	0	0	0	0	38	0	61	99	142	23	138	0	161	0	88	20	108	142	368
17:30	17:45	0	0	0	0	33	0	55	88	128	27	130	0	157	0	93	13	106	128	351
17:45	18:00	0	0	0	0	35	0	58	93	140	17	164	0	181	0	85	30	115	140	389
	10.00	0	0	0	0	1424	0	1852	3277	6024	1932	3040	0	5770	0	3706	1915	5612	6024	14 661

Note: U-Turns are included in Totals.

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January 30, 2020

Page 4 of 8

### **Transportation Services - Traffic Services** Ottawa **Turning Movement Count - Study Results** SMYTH RD @ GENERAL HOSPITAL E Survey Date: Wednesday, December 11, 2019 WO No: 39229 Start Time: 07:00 Device: Miovision Full Study Cyclist Volume GENERAL HOSPITAL E SMYTH RD Time Period Northbi 07:00 07:15 0.0 07:15 07:30 0 07:30 07:15 0.0 07:30 07:45 0.0 07:40 08:00 0 08:00 08:15 1 08:30 08:45 0 09:30 09:45 0.0 09:00 09:15 2 09:15 09:30 0 09:30 08:45 0 09:30 09:46 0 09:30 08:45 0 11:30 11:45 12:00 12:30 12:45 0 12:30 12:45 0 12:30 12:45 0 13:30 13:45 0 15:30 15:45 15:30 0 15:30 15:45 15:30 15:45 0 15:30 15:45 0 15:30 15:45 0 15 South Stre Eastboun et Total Grand Total

# Ottawa

### **Transportation Services - Traffic Services**

		Turning	Movem	ent Count -	Study Resul	ts	
		SMYTI	H RD @	GENERAL I	HOSPITAL E		
Survey Dat	te: Wednesda	v. December 11.2	2019		WO No:		39229
Start Time	• 07·00				Dovico:		Miovision
otart min	07.00	-			Device.		WIOVISION
			ull Stud	ly Pedestrial	n volume		
	G	ENERAL HOSPIT	ALE		SMYTH RD		
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	0	4	4	4
07:15 07:30	0	1	1	3	4	7	8
07:30 07:45	0	2	2	3	5	8	10
07:45 08:00	0	1	1	4	8	12	13
08:00 08:15	0	0	0	4	17	21	21
08:15 08:30	0	0	0	2	20	22	22
08:30 08:45	0	2	2	3	14	17	19
08:45 09:00	0	0	0	1	7	8	8
09:00 09:15	0	3	3	0	21	21	24
09:15 09:30	0	0	0	1	23	24	24
09:30 09:45	0	0	0	1	21	22	22
09:45 10:00	0	2	2	2	21	23	25
11:30 11:45	0	0	0	2	28	30	30
11:45 12:00	0	2	2	6	19	25	27
12:00 12:15	0	2	2	0	18	18	20
12:15 12:30	0	1	1	2	11	13	14
12:30 12:45	0	2	2	1	18	19	21
12:45 13:00	0	2	2	1	27	28	30
13:00 13:15	0	0	0	3	28	31	31
13:15 13:30	0	0	0	1	21	22	22
15:00 15:15	0	0	0	3	12	15	15
15:15 15:30	0	1	1	2	13	15	16
15:30 15:45	0	3	3	5	13	18	21
15:45 16:00	0	6	6	2	20	22	28
16:00 16:15	0	1	1	3	14	17	18
16:15 16:30	0	1	1	4	23	27	28
16:30 16:45	0	1	1	7	16	23	24
16:45 17:00	0	1	1	0	17	17	18
17:00 17:15	0	4	4	1	7	8	12
17:15 17:30	0	1	1	0	7	7	8
17:30 17:45	0	0	0	0	1	1	1
17:45 18:00	0	2	2	6	5	11	13
Total	0	41	41	73	483	556	597

Total

January 30, 2020

Otto	wa		Tra	ans	por	tati	on	Ser	vic	es -	Tra	affic	: Se	rvio	ces				
				Т	urn	ing	Μον	eme	ent (	Cou	nt -	Stud	dy R	esu	lts				
					SM	YTH	I RD	0	GEN	IER	AL I	HOS	PIT	AL	E				
Survey Dat	- 1A			Deres		44 0	040	<u> </u>	-									0000	
Survey Dat	. vv	eane	isday,	Dece	mber	11, 2	019						wo	NO:			3	9229	
Start Time	e: 0/	(:00											Dev	ice:			Mie	ovision	
						F	ull S	stud	у Не	avy	Vel	nicle	s						
		GE	NERA	l ho	SPITA	L E						SN	IYTH	RD					
	N	orthbo	und		Sc	uthbou	ind			E	astbou	nd		W	estbour	nd			
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	w тот	STR TOT	Grand Total
07:00 07:15	0	0	0	0	1	0	0	5	5	3	0	0	13	0	10	1	12	25	15
07:15 07:30	0	0	0	0	1	0	1	3	3	0	3	0	11	0	7	1	12	23	13
07:30 07:45	0	0	0	0	0	0	1	4	4	1	1	0	8	0	5	2	8	16	10
07:45 08:00	0	0	0	0	1	0	0	6	6	1	3	0	7	0	3	4	11	18	12
08:15	0	0	0	0	1	0	1	4	4	0	3	0	9	0	10	2	11	20	12
08:15 08:30	0	0	0	0	1	0	0	3	3	2	2	0	14	0	10	0	13	21	15
08.45 00.00	0	0	0	0	0	0	1	4	4	1	11	0	0	0	4	2	10	32	18
19:00 09:00	0	0	0	0	0	0	0	4	4	1	8	0	20	0	11	3	22	42	23
09:15 09:30	0	0	0	0	0	0	1	6	6	2	2	0	8	0	3	3	8	16	11
09:30 09:45	0	0	0	0	2	0	0	4	4	1	4	0	7	0	2	1	9	16	10
09:45 10:00	0	0	0	0	0	0	1	3	3	1	5	0	14	0	7	1	13	27	15
11:30 11:45	0	0	0	0	2	0	0	7	7	3	9	0	16	0	4	2	17	33	20
11:45 12:00	0	0	0	0	0	0	2	8	8	1	4	0	8	0	1	5	10	18	13
12:00 12:15	0	0	0	0	0	0	1	4	4	1	4	0	7	0	1	2	7	14	9
12:15 12:30	0	0	0	0	0	0	3	5	5	1	0	0	7	0	3	1	4	11	8
12:30 12:45	0	0	0	0	1	0	1	7	7	2	3	0	15	0	9	3	16	31	19
12:45 13:00	0	0	0	0	0	0	1	2	2	0	3	0	8	0	4	1	8	16	9
13:00 13:15	0	0	0	0	0	0	1	5	5	3	4	0	13	0	5	1	10	23	14
13:15 13:30	0	0	0	0	0	0	3	6	6	2	1	0	10 22	0	7	2	4	10	ð 24
15:15 15:30	0	0	0	0	1	0	2	0	0	2	6	0	12	0	/	1	20	42	24
15:30 15:45	0	0	0	0	0	0	1	5	5	3	3	0	10	0	3	1	7	17	11
15:45 16:00	0	0	0	0	0	0	1	1	1	0	8	0	16	0	7	0	15	31	16
16:00 16:15	0	0	0	0	0	0	4	7	7	1	6	0	12	0	1	2	9	21	14
16:15 16:30	0	0	0	0	1	0	0	5	5	3	3	0	6	0	0	1	5	11	8
16:30 16:45	0	0	0	0	1	0	1	3	3	1	2	0	5	0	1	0	4	9	6
16:45 17:00	0	0	0	0	0	0	1	4	4	2	4	0	7	0	0	1	5	12	8
17:00 17:15	0	0	0	0	1	0	0	4	4	1	7	0	10	0	2	2	12	22	13
17:15 17:30	0	0	0	0	0	0	2	5	5	3	3	0	8	0	0	0	3	11	8
17:30 17:45	0	0	0	0	1	0	1	5	5	1	1	0	4	0	1	2	5	9	7
17:45 18:00	0	0	0	0	0	0	1	4	4	2	2	0	7	0	2	1	5	12	8
Total: None	0	0	0	0	15	0	35	147	147	44	129	0	334	0	126	53	323	657	402

January 30, 2020

Ottawa	i
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#### **Transportation Services - Traffic Services**

# Turning Movement Count - Study Results SMYTH RD @ GENERAL HOSPITAL E

Survey I Start Ti	Date: Wedne me: 07:00	sday, Dece	ember 11, 2019		WC De	) No: vice:	39229 Miovision
			Full S	tudy 15 Mir SPITAL E	nute U-Turn si	N Total	
	Time F	Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
	07:00	07:15	0	0	0	0	0
	07:15	07:30	0	0	0	0	0
	07:30	07:45	0	0	0	0	0
	07:45	08:00	0	0	0	0	0
	08:00	08:15	0	0	0	0	0
	08:15	08:30	0	0	0	0	0
	08:30	08:45	0	0	0	0	0
	08:45	09:00	0	0	0	0	0
	09:00	09:15	0	0	0	0	0
	09:15	09:30	0	0	0	0	0
	09:30	09:45	0	0	0	0	0
	09:45	10:00	0	0	0	1	1
	11:30	11:45	0	0	0	0	0
	11:45	12:00	0	0	0	0	0
	12:00	12:15	0	0	0	0	0
	12:15	12:30	0	0	0	0	0
	12:30	12:45	0	0	0	0	0
	12:45	13:00	0	0	0	0	0
	13:00	13:15	0	0	0	0	0
	13:15	13:30	0	0	0	0	0
	15:00	15:15	0	0	0	0	0
	15:15	15:30	0	0	0	0	0
	15:30	15:45	0	0	0	0	0
	15:45	16:00	0	0	0	0	0
	16:00	16:15	0	0	0	0	0
	16:15	16:30	0	0	0	0	0
	16:30	16:45	0	0	0	0	0
	16:45	17:00	0	0	0	0	0
	17:00	17:15	0	0	0	0	0
	17:15	17:30	0	0	0	0	0
	17:30	17:45	0	0	0	0	0
	17:45	18:00	0	0	0	0	0
	т.	4-1	0	٥	0	1	

#### January 30, 2020

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Leg	East					South					West					
Direction	Westbound					Northbound					Eastbound					
Time	Т	L	U	App	Ped*	R	L	U	App	Ped*	R	Т	U	App	Pe d*	Int
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	15.4%	

 % Bicycles on Crosswalk
 0%

 \*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Barborner b	Classes (Lights and J	Antorev	clas H	le avv	Dodos	triane	Bicycl	as on P	0.30	a l							
Norments       Distribute       State	vcles on Crosswalk)	lotorcy	cic 3, 11	cuvy,	reacs	ii idii 5	, Dicyci	C3 011 IV	oat	ц,			F	Provid	ed by: C	ity of	Ottawa
D: 754899, Location: 45.00393, -75.653508, Site Cole:       39524103       Substrate Site Cole:       Substrae Site Cole:       Substrate Site	Movements													Nonor	.00 Con	stellat	10 Dr,
Part         Sauth         Sauth         Sauth         West         West         West         Sauth         Mark         Sauth         Saut	: 754899, Location: 45	.403939	9, -75.6	53508	3, Site	Code	: 39524	103						repea	in, Oiv,	R20 .	55, CA
bit         bit<	1	East					South					West					
Time         N	ection	Westbo	und				Northbo	und				Eastbou	ınd				
20200-22 07 :00.M         7         4         0         110         12         2         0         14         1         24         43         0         67.3         0         1           7:15AM         18         0         0         27         0         18         2         0         34         3         18         0.7         0         1         70         34         0         38         1         10         323         17         0         34         3         14         13         329         0         56         0         1         1         329         1         10         24         9         0         33         2         28         68         0         76         0         1         10         24         37         0         56         0         10	ne	Т	L	U	Арр	Ped*	R	L	U	Арр	Ped*	R	Т	U	Арр	Ped*	Int
7:15.0M       10       0       0       19       1       18       2       0       20       3       25       4.8       0       7.3       0	2020-02-20 7:00 AM	1 7	4	0	11	0	12	2	0	14	1	24	43	0	67	1	92
7:30.M       18       9       0       27       17       9       0       26       5       18       7.2       0       9.0       1         Hourly Total       49       28       0       7.7       1       7.0       2.4       0       9.4       13       10.7       12       1.1       3.22       1.1       1.329       1       1.3         B<15MM	7:15 AM	1 10	9	0	19	1	18	2	0	20	3	25	48	0	73	0	112
7:45.AM       14       6       0       20       12       11       0       34       3       40       5.8       1       99       0         B000AM       18       10       0       28       0       7.1       1       0       30       2       8.68       0       7.4       0       2       9       0       31       3       2.2       8.68       0       7.4       0       0       31       43       3       0       5.66       0       1.0       0       31       0       2.2       7       0       31       13       0       5.6       0       1.0       13       0       2.2       7       0       13       10       2.4       37       0       3.4       0       1.0       0       1.0       0       1.0       1.0       0       1.0       1.0       0       1.0	7:30 AM	1 18	9	0	27	0	17	9	0	26	5	18	72	0	90	0	143
Hourty Total         49         28         0         770         2.4         0         94         1.2         107         2.1         1         2.429         1.2         107         2.1         1         2.429         0         331         4.3         0         95         0         1         1.3         2.3         3.3         0         95         0         1.4         1.0         2.2         2.9         0         331         3.3         1.0         1.4         0         2.2         2.9         0         331         3.3         0         6.6         0         1.0 <th1.0< th="">         1.0</th1.0<>	7:45AM	1 14	6	0	20	0	23	11	0	34	3	40	58	1	99	0	153
82:00.M       18       10       0       23       7       0       30       4       31       43       0       74       0         83:51AM       14       13       0       27       0       22       9       0       31       3       23       33       0       56       0         Bast5AM       15       13       0       28       0       22       7       0       23       13       106       18       0       24       37       0       56       0       1         900AM       11       11       0       22       0       17       10       0       10       14       0       27       1       11       46       0       24       0       34       0       23       0       14       14       0       26       0       14       0       26       0       14       0       26       0       14       0       26       0       14       0       26       0       15       0       27       0       15       0       16       15       0       16       15       0       16       16       13       0       10 <td>Hourly Tota</td> <td>49</td> <td>28</td> <td>0</td> <td>77</td> <td>1</td> <td>70</td> <td>24</td> <td>0</td> <td>94</td> <td>12</td> <td>107</td> <td>221</td> <td>1</td> <td>329</td> <td>1</td> <td>500</td>	Hourly Tota	49	28	0	77	1	70	24	0	94	12	107	221	1	329	1	500
88:15AM       12       29       0       31       3       21       28       68       0       96       0         88:30AM       15       13       0       27       0       22       7       0       21       33       3       0       66       0         BastAM       15       13       0       28       0       123       13       166       181       0       277       0       44       0       24       0       110       24       0       57       0       44       0       28       0       17       10       24       0       24       0       24       0       24       0       24       0       18       0       217       1       111       0       24       0       18       0       16       0       18       0       18       0       18       0       19       0       10       10       10       10       10       10       10       10       10       10       10       110       10       10       10       10       110       10       110       10       10       10       10       10       10       10	8:00AM	1 18	10	0	28	0	23	7	0	30	4	31	43	0	74	0	132
8:30AM       14       1.3       0       27       0       22       7       0       22       7       0       31       32       3.3       0       58       0       1         Hourity Total       69       45       0       114       0       91       32       0       12       13       106       18       0       287       0       14       60       0       77       0       15       0       27       1       10       24       0       34       0       10       10       14       0       10       10       10       11       10       24       0       11       10       24       0       11       10       24       0       11       10       27       0       11       10       10       10       10       10       10       10       10       10       10       10       10       10       11       10       10       10       11       10       11       10       11       10       11       10       11       10       10       10       11       10       10       10       11       10       10       10       11       10<	8:15 AM	1 22	9	0	31	0	24	9	0	33	2	28	68	0	96	0	160
Balas,Ma         15         13         0         20         14         0         20         20         40         20         40         61         0         61         0           9:00,MA         11         11         0         22         0         17         10         0         213         13         10         24         0         57         0         4         0           9:00,MA         11         0         22         0         110         24         0         77         0         44         0           9:30,MA         14         5         0         17         0         16         10         24         0         13         0         14         14         0         18         4         0         18         0         10         16         0         16         10         10         10         16         0         11         0         11         0         11         0         10         16         0         16         11         10         11         10         10         10         16         0         11         10         11         10         11         10	8:30 AM	1 14	13	0	27	0	22	9	0	31	3	23	33	0	56	0	114
Hourry load         63         63         63         64         0         114         0         911         32         0         123         10         10         10         0         287         11         146         0         77         0         15         0         127         10         12         10         10         12         0         34         0         34         0           9350.M         16         11         0         27         0         118         4         0         22         0         15         32         0         47         3           Hourly Total         49         34         0         37         0         12         50         17         0         6         10         6         10         6         10         10         6         10         10         6         10         10         10         11         10         10         10         10         10         10         11         10         11         10         11         10         11         10         11         10         11         11         10         11         11         10         11	8:45 AM	1 15	13	0	28	0	22	/	0	29	4	24	3/	0	61	0	118
30.0058         11         11         10         22         10         10         20         1         11         24         0         34         0           9:36AM         14         5         0         15         0         12         8         0         10         24         0         34         0           9:36AM         16         11         0         27         0         14         4         0         18         0         17         2         0         44         0           11:30AM         14         5         0         19         0         6         13         0         18         0         16         0         6         13         0         19         0           11:30AM         12         6         0         18         0         12         23         0         35         0           12:00FM         28         11         0         37         0         22         10         0         15         2         6         21         23         0         27         0           12:159M         30         7         0         27         0 <td< td=""><td>Houriy I ota</td><td>69</td><td>45</td><td>0</td><td>114</td><td>0</td><td>91</td><td>32</td><td>0</td><td>123</td><td>13</td><td>106</td><td>181</td><td>0</td><td>287</td><td>0</td><td>524</td></td<>	Houriy I ota	69	45	0	114	0	91	32	0	123	13	106	181	0	287	0	524
3.1.3.5.4.         16         17.         17.         17.         18.         10.         17.         27.         10.         14.         10.         17.         27.         10.         14.         10.         17.         1	9:00AM	1 11	7	0	15	0	17	10	0	27	1	10	24	0	3/	0	100
3-0.008         12         3         0         12         2         11         12         2         14         4         0         12         2         0         14         4         0         11         5         32         0         14         3         0         11         12         0         14         3         0         11         12         0         11         5         32         0         147         3           Hourly Total         45         0         19         0         6         10         0         16         0         13         0         12         23         0         16         0         16         11         0         10         5         0         12         14         0         26         11         0         27         0         12         14         0         26         11         0         10         5         0         11         13         0         12         13         0         27         0         11         13         0         14         1         12         13         13         14         1         13         14         0         14	9:15 AM	1 0		0	15	0	12	0	0	20	1	10	24	0	34	0	03
base         base <th< td=""><td>9:50A8</td><td>1 14</td><td>11</td><td>0</td><td>19</td><td>0</td><td>14</td><td>4</td><td>0</td><td>10</td><td>0</td><td>17</td><td>27</td><td>0</td><td>44</td><td>2</td><td>01</td></th<>	9:50A8	1 14	11	0	19	0	14	4	0	10	0	17	27	0	44	2	01
International         1.3         1.4         5         0         0.5         0.6         0.1         0.2         0.3         0.6         0.1         0.2         0.2         0.0         0.1         0.0 <th0.< td=""><td>Hourly Tota</td><td>1 10</td><td>2.4</td><td>0</td><td>27</td><td>0</td><td>61</td><td>26</td><td>0</td><td>97</td><td>2</td><td>1.5</td><td>120</td><td>0</td><td>19.7</td><td>2</td><td>252</td></th0.<>	Hourly Tota	1 10	2.4	0	27	0	61	26	0	97	2	1.5	120	0	19.7	2	252
11.1.45AM         1.2         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0         0         1.0	11:20 AA	143	54	0	10	0	10	20	0	16	2	55	12.5	0	102	0	532
Houriy Total         26         1         0         37         0         12         13         0         12         23         0         33         0         12         23         0         33         0         12         23         0         33         0           12:00PM         41         5         0         40         1         10         5         0         112         14         0         26         1         0         27         0         12         14         0         26         1         0         12         13         0         27         0         12         13         0         27         0         12         13         0         12         13         0         12         13         0         12         13         0         12         13         0         12         13         0         12         13         0         13         1         12         13         0         13         1         12         13         0         13         1         1         10         13         1         13         13         13         13         13         13         13         13	11:45 AM	1 14	6	0	13	0	10	5	0	10	0	6	10	0	15	0	51
112.000M         141         5         0         66         2         12         9         0         11         0         26         14         0         26         14         0         26         14         0         26         14         0         26         14         0         26         14         0         26         14         0         27         0           12:350M         28         11         0         30         2         9         9         0         16         16         12         13         0         54         0           12:350M         12         11         13         0         24         14         29         0         16         11         13         16         21         33         0         54         0           1:100M         16         5         0         21         11         16         2         0         16         21         13         0         26         1         6         26         0         22         1         11         16         20         16         0         26         1         11         16         20         1         1<	Hourly Tota	26	11	0	37	0	22	11	0	33	0	12	23	0	35	0	105
112:157M       32       8       0       40       10       5       0       15       2       6       2.1       0       2.7       0         12:357M       28       11       0       39       2       9       9       0       18       0       7       20       0       2.7       0         12:357M       20       7       0       27       0       16       1       21       33       0       54       0         Hourly Total       121       31       0       152       5       41       29       0       70       3       46       88       0       34       1       1       1       13       18       0       31       1       1       1       13       18       0       31       1       1       13       18       0       31       1       1       13       14       1       13       18       0       32       1       14       1       13       18       0       22       1       16       2       2       17       12       13       14       1       11       16       0       27       1       13 <td< td=""><td>12:00PM</td><td>41</td><td>5</td><td>0</td><td>46</td><td>2</td><td>12</td><td>9</td><td>0</td><td>21</td><td>0</td><td>12</td><td>14</td><td>0</td><td>26</td><td>1</td><td>93</td></td<>	12:00PM	41	5	0	46	2	12	9	0	21	0	12	14	0	26	1	93
12:309M       28       11       0       39       2       9       9       0       18       0       7       20       0       27       0       1       18       0       7       20       0       27       0       1       18       0       7       20       0       27       0       1       1       13       0       154       0       16       1       21       31       0       152       1       1       11       13       0       121       31       0       120       1       1       16       2       0       16       1       1       18       1	12:15PM	1 32	8	0	40	1	10	5	0	15	2		21	0	27	0	82
12:45PN         20         7         0         27         0         10         6         0         16         1         21         33         0         54         0           Hourty Total         121         31         0         152         5         41         129         0         76         3         46         88         0         134         1           1:00PM         16         5         0         21         0         11         13         0         26         0         13         1         13         18         0         31         1           3:00PM         40         18         0         20         18         10         22         1         16         2         13         18         0         21         13         18         0         21         13         14         1         11         16         0         27         11         16         0         26         14         20         27         12         0         13         1           3:00PM         51         11         0         62         0         23         3         16         0         20	12:30PM	28	11	0	39	2	9	9	0	18	0	7	20	0	27	0	84
Hourly Total         121         31         0         152         3         41         29         0         76         3         46         80         0         134         1         1           L100PM         16         5         0         21         0         11         13         0         24         0         6         20         0         1         13         18         0         26         0         1         13         18         0         26         0         26         0         26         1         19         38         0         27         1         1         3         18         0         27         1         11         16         0         27         1         1         3         18         0         26         1         6         26         0         27         1         1         3         3         0         26         3         6         7         0         13         1         0         0         0         0         13         1         0         0         0         13         1         0         0         0         13         1         0         0	12:45PM	1 20	7	0	27	0	10	6	0	16	1	21	33	0	54	0	97
100M         16         5         0         11         13         0         24         0         6         20         26         0           115PM         12         6         0         20         1         13         0         24         1         13         18         0         31         1           3:00PM         40         18         0         58         0         8         18         0         22         1         19         38         0         31         1           3:00PM         40         18         0         58         0         8         18         0         22         1         16         6         26         32         0         33         11         16         57         1         1         0         62         0         8         12         0         22         1         11         16         0         27         13         1           3:35PM         51         11         0         62         0         33         61         0         94         1         16         28         3         212         13         14         14         14	Hourly Tota	1 121	31	0	152	5	41	29	0	70	3	46	88	0	134	1	356
11:15 M       12       8       0       20       1       16       2       0       18       1       13       13       0       31       1         Hourly Total       28       13       0       41       1       27       15       0       42       1       9       38       0       31       1         3:00PM       40       18       0       58       0       9       13       0       22       1       11       16       0       27       1         3:30PM       51       11       0       62       0       8       18       0       26       3       6       7       0       10       13       1         3:30PM       56       16       0       52       0       8       12       0       20       2       7       12       0       10       12       4       4       0       6       0       15       14       0       9       1       1       13       13       0       22       0       13       17       0       30       61       0       10       10       10       10       10       10       1	1:00PM	1 16	5	0	21	0	11	13	0	24	0	6	20	0	26	0	71
Hourly Total         28         13         0         41         1         27         15         0         42         1         19         38         0         57         1           3.300PM         40         18         0         58         0         9         13         0         26         1         6         26         0         22         0         11         16         0         22         1         111         16         0         27         1         1         1         16         0         27         1         1         1         0         13         1         0         26         3         6         7         0         13         1         0         26         2         7         12         0         13         1         0         20         2         7         12         0         13         0         26         1         18         0         20         2         2         14         14         0         28         15         0         20         2         1         13         0         0         0         10         10         14         14         14         0	1:15PM	1 12	8	0	20	1	16	2	0	18	1	13	18	0	31	1	69
3:000M       40       18       0       58       0       8       18       0       26       1       6       6       0       32       0         3:15PM       43       20       0       63       0       9       13       0       22       1       11       16       0       32       0       13       11       16       0       32       0       13       11       16       0       32       0       8       18       0       26       3       6       7       12       0       13       1       0       10       0       10       0       10       10       0       20       2       2       7       12       0       13       17       28       0       45       1       7       13       0       20       2       2       1       4       18       0       66       0       13       17       0       20       2       18       18       18       18       16       18       18       12       7       0       20       1       1       14       14       14       14       14       14       14       14       14 <td>Hourly Tota</td> <td>1 28</td> <td>13</td> <td>0</td> <td>41</td> <td>1</td> <td>27</td> <td>15</td> <td>0</td> <td>42</td> <td>1</td> <td>19</td> <td>38</td> <td>0</td> <td>57</td> <td>1</td> <td>140</td>	Hourly Tota	1 28	13	0	41	1	27	15	0	42	1	19	38	0	57	1	140
3:15PM       43       20       0       63       0       9       13       0       22       1       111       16       0       27       1       1         3:3:0PM       56       16       0       52       0       8       18       0       26       3       67       7       0       13       1         3:3:0PM       56       16       0       52       0       8       12       0       20       2       7       12       0       19       0       1         4:00PM       65       31       0       96       0       17       28       0       45       1       7       13       0       20       2       2       1       4       18       0       66       0       15       14       0       25       13       0       18       1       14       0       25       13       0       18       1       1       18       12       14       14       14       16       127       11       18       56       0       74       3       3       12       0       14       10       12       11       16       12 <td>3:00PM</td> <td>1 40</td> <td>18</td> <td>0</td> <td>58</td> <td>0</td> <td>8</td> <td>18</td> <td>0</td> <td>26</td> <td>1</td> <td>6</td> <td>26</td> <td>0</td> <td>32</td> <td>0</td> <td>116</td>	3:00PM	1 40	18	0	58	0	8	18	0	26	1	6	26	0	32	0	116
3:3:0PM       51       11       0       62       0       8       12       0       26       2       3       6       7       12       0       13       1         3:3:45PM       35       16       0       52       0       8       12       0       20       2       7       12       0       90       0         Hourly Toul       170       65       0       235       61       0       94       7       30       61       0       91       2       2         4:00PM       65       31       0       96       0       17       28       0       45       1       7       13       0       20       2       2       0       12       1       418       0       20       2       2       0       13       17       0       30       2       513       0       18       18       0       16       18       0       20       18       12       10       18       14       0       18       10       10       14       0       18       10       17       8       0       15       1       10       10       10       <	3:15PM	43	20	0	63	0	9	13	0	22	1	11	16	0	27	1	112
3:45 PM       36       16       0       52       0       8       12       0       20       2       7       12       0       19       0         HoutyTotal       170       65       0       235       0       3       61       0       90       2       7       12       0       10       20       2       4         4:00PM       65       31       0       96       0       17       28       0       45       1       7       13       0       20       2       2       4       18       0       66       0       13       17       0       30       2       5       13       0       18       1       1       4       0       68       15       0       23       3       2       16       1       4       0       18       10       127       11       85       0       15       0       127       11       85       0       15       0       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10 </td <td>3:30PM</td> <td>1 51</td> <td>11</td> <td>0</td> <td>62</td> <td>0</td> <td>8</td> <td>18</td> <td>0</td> <td>26</td> <td>3</td> <td>6</td> <td>7</td> <td>0</td> <td>13</td> <td>1</td> <td>101</td>	3:30PM	1 51	11	0	62	0	8	18	0	26	3	6	7	0	13	1	101
Hourly Total         170         65         9         235         9         33         61         0         94         7         30         61         0         91         2         4           4.00PM         65         31         0         96         0         17         28         0         45         1         7         13         0         20         2         1           4:15PM         46         20         0         66         0         15         14         0         29         5         4         18         0         20         2         0           4:35PM         46         20         0         66         0         13         17         0         30         2         12         0         14         0           Hourly Total         188         83         1         272         0         53         7         0         20         1         1         8         0         0         0         2         7         0         0         0         1         0         2         7         0         0         0         15         1         7         8         0 <td>3:45PM</td> <td>1 36</td> <td>16</td> <td>0</td> <td>52</td> <td>0</td> <td>8</td> <td>12</td> <td>0</td> <td>20</td> <td>2</td> <td>7</td> <td>12</td> <td>0</td> <td>19</td> <td>0</td> <td>91</td>	3:45PM	1 36	16	0	52	0	8	12	0	20	2	7	12	0	19	0	91
4:00°M       65       31       0       96       0       17       28       0       45       17       78       17       18       17       18       17       28       17       28       17       18       17       18       17       18       17       18       17       18       18       10       15       14       0       29       5       13       0       18       17       18       18       18       14       10       18       15       18       0       18       14       10       18       15       18       12       12       0       18       14       10       18       15       18       0       12       13       17       10       30       12       12       0       18       14       0       18       15       14       10       12       10       14       10       15       11       10       18       18       16       16       16       12       10       18       10       10       10       14       10       10       10       10       10       10       10       10       10       10       10       10       10 <td>Hourly Tota</td> <td>l 170</td> <td>65</td> <td>0</td> <td>235</td> <td>0</td> <td>33</td> <td>61</td> <td>0</td> <td>94</td> <td>7</td> <td>30</td> <td>61</td> <td>0</td> <td>91</td> <td>2</td> <td>420</td>	Hourly Tota	l 170	65	0	235	0	33	61	0	94	7	30	61	0	91	2	420
41:5PM       46       20       0       66       0       15       14       0       29       5       4.8       0       2.2       0       1         44:3DM       48       18       0       66       0       13       17       0       30       2       5       13       10       0.4       18       0       2.2       0       1.4       1       4.4       0       88       5       0       2.3       2       12       0       1.4       1.4       0       88       15       0       2.4       3       2.2       0       0       4       0       0       1.6       1.6       0       0       0       0       0       1.6       0       1.6       0       0       0       0       0       0       1.6       0       1.6       0       1.5       1       0       0       0       0       0       0       0       0       0       0       0	4:00PM	65	31	0	96	0	17	28	0	45	1	7	13	0	20	2	161
4:3:0:M       4:8       18       0       66       0       13       17       0       30       2       5       13       0       18       1       1         4:45PM       29       14       1       44       0       8       15       2       32       32       12       2       0       18       1       40       0       13       17       0       32       32       12       20       0       14       0       1       10       10       0       10       0       16       15       0       120       12       0       74       0       16       0       12       10       18       16       0       12       10       0       10       0       10       0       10       0       16       0       10       10       0       10       0       10       0       10       0       10       10       10       10       10       15       10 </td <td>4:15PM</td> <td>46</td> <td>20</td> <td>0</td> <td>66</td> <td>0</td> <td>15</td> <td>14</td> <td>0</td> <td>29</td> <td>5</td> <td>4</td> <td>18</td> <td>0</td> <td>22</td> <td>0</td> <td>117</td>	4:15PM	46	20	0	66	0	15	14	0	29	5	4	18	0	22	0	117
4:4:5 W       29       14       1       44       0       8       15       0       23       2       0       14       0       14       0       14       0       14       0       14       0       14       0       14       10       14       10       14       10       14       10       14       10       14       10       14       10       14       10       14       10       14       10       14       10       14       10       15       11       16       0       127       11       18       56       0       9       0       15       1       12       17       18       0       0       9       0       15       1       15       10       12       17       18       0       15       1       15       10       10       15       10 <t< td=""><td>4:30PM</td><td>48</td><td>18</td><td>0</td><td>66</td><td>0</td><td>13</td><td>17</td><td>0</td><td>30</td><td>2</td><td>5</td><td>13</td><td>0</td><td>18</td><td>1</td><td>114</td></t<>	4:30PM	48	18	0	66	0	13	17	0	30	2	5	13	0	18	1	114
Hourly Total         118         88         1         272         0         53         74         0         127         11         18         18         6         9         74         0         14           5500PM         30         10         0         40         0         5         15         0         24         1         18         56         0         74         0         0         0         0         0         10         0         40         0         5         15         0         24         18         0         15         1         7         8         0         15         1         7         8         0         15         1         7         8         0         15         1         7         8         0         15         1         7         8         0         15         1         7         8         0         15         1         17         8         18         16         17         18         15         10         16         14         10         18         16         0         14         10         10         117         117         117         117         117	4:45PM	1 29	14	1	44	0	8	15	0	23	3	2	12	0	14	0	81
5:00°M         35         32         0         67         0         8         16         0         24         1         2         7         0         9         0           5:15°M         30         10         0         40         0         5         15         0         20         3         6         9         0         5         0         10         0         10         0         20         3         6         9         0         15         0         15         0         15         0         15         1         17         8         0         15         1         17         18         0         15         1         17         8         0         15         1         17         18         18         0         15         1         17         18         18         0         15         1         17         18         14         0         68         12         15         0         15         1         117         18         13         13         10         10         10         10         10         10         1176         2         15         0         1176         12 <t< td=""><td>Hourly Tota</td><td>1 188</td><td>83</td><td>1</td><td>272</td><td>0</td><td>53</td><td>74</td><td>0</td><td>127</td><td>11</td><td>18</td><td>56</td><td>0</td><td>74</td><td>3</td><td>473</td></t<>	Hourly Tota	1 188	83	1	272	0	53	74	0	127	11	18	56	0	74	3	473
5:15°M       30       10       0       40       0       5       15       0       20       3       6       9       0       15       0         5:30°M       19       7       0       26       0       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       10 <t< td=""><td>5:00PM</td><td>1 35</td><td>32</td><td>0</td><td>67</td><td>0</td><td>8</td><td>16</td><td>0</td><td>24</td><td>1</td><td>2</td><td>7</td><td>0</td><td>9</td><td>0</td><td>100</td></t<>	5:00PM	1 35	32	0	67	0	8	16	0	24	1	2	7	0	9	0	100
5:30°M       19       7       0       26       0       7       8       0       15       1       7       8       0       15       1       7       8       0       15       1       17       8       0       15       1       17       18       0       15       1       17       18       0       15       1       17       18       0       15       1       17       18       0       15       1       17       18       0       15       1       17       18       0       15       1       17       18       0       15       0       15       1       17       18       0       15       0       15       1       17       18       16       15       0       15       1       17       1       11       12       11       11       11       11       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       11       10       10       10       10       10       10       10       10       10       10       10 <t< td=""><td>5:15PM</td><td>1 30</td><td>10</td><td>0</td><td>40</td><td>0</td><td>5</td><td>15</td><td>0</td><td>20</td><td>3</td><td>6</td><td>9</td><td>0</td><td>15</td><td>0</td><td>75</td></t<>	5:15PM	1 30	10	0	40	0	5	15	0	20	3	6	9	0	15	0	75
5:45 PM         23         9         0         32         0         4         5         0         9         0         9         6         0         15         1           Houry Total         107         58         0         165         0         4         4         6         68         5         24         30         0         15         1           Total         28.07         31.3%         0.1%         -         57.2%         42.8%         0.%         -         33.4%         66.5%         0.1%         -         -         57.2%         42.8%         0.%         -         33.4%         66.5%         0.1%         -         -         57.2%         42.8%         0.%         0.5%         0.1%         -         -         33.4%         66.5%         0.1%         -         -         2.5%         11.7%         0.3%         0.5%<	5:30PM	1 19	7	0	26	0	7	8	0	15	1	7	8	0	15	1	56
Hourly Total         107         58         0         165         0         24         44         0         68         5         24         30         0         54         2         2           Total         807         368         1176         7         24         24         30         68         5         24         30         0         54         2         2           % Appraxch         66.6%         31.38         0.1%         -         57.2%         42.38         0.8         -         -         33.4%         66.5%         0.1%         -         -         33.4%         66.5%         0.1%         -         -         33.4%         66.5%         0.1%         -         -         33.4%         66.5%         0.1%         -         -         33.4%         66.5%         0.1%	5:45PM	1 23	9	0	32	0	4	5	0	9	0	9	6	0	15	1	56
Total         807         368         1         1176         7         422         316         0         738         54         415         827         1         1243         13         3           % Apprach         66.56%         31.3%         0.1%         -         52.5%         42.8%         66.5%         0.1%         -         -         4         56.2%         11.7%         0.8%         57.2%         42.8%         0.6%         -         31.4%         65.5%         0.1%         -         -         4         3         3.4%         65.5%         0.1%         -         -         26.2%         0.%         39.4%         -         2         3         55.5%         65.7%         0.5%         65.7%         0.5%         57.5%         65.7%         0.5%         57.5%         65.7%         0.5%         57.5%         65.7%         0.5%         0.4%         -         2.4%         64.4%         -         4.5%         1.4%         0.4%         4.4%         4.5%         1.0%         9.4%         0.4%         -         4.5%         1.4%         0.1%         0.6%         5.1%         -         5.5%         0.7%         0.5%         0.5%         0.5%         0.5% <td>Hourly Tota</td> <td>1 107</td> <td>58</td> <td>0</td> <td>165</td> <td>0</td> <td>24</td> <td>44</td> <td>0</td> <td>68</td> <td>5</td> <td>24</td> <td>30</td> <td>0</td> <td>54</td> <td>2</td> <td>287</td>	Hourly Tota	1 107	58	0	165	0	24	44	0	68	5	24	30	0	54	2	287
% Appraach         68.6%         31.3%         0.1%         -         57.2%         42.8%         0.1%         -         33.4%         65.8%         0.1%         -           % Total         25.6%         11.7%         0.6%         37.3%         13.4%         10.0%         06.8%         32.4%         13.1%         26.2%         0.%         33.4%         65.8%         0.1%         -         -           Lights and Motorcycles         77.3%         13.3%         61.3%         0.0%         0.1%         -         23.4%         61.3%         0.0%         93.4%         -         23.5%         0.0%         93.4%         -         23.5%         0.0%         93.4%         0.0%         0.0%         23.4%         0.1%         <	Tota	807	368	1	1176	7	422	316	0	738	54	415	827	1	1243	13	3157
% Total         25.6%         11.7%         0%         37.3%         13.4%         10.0%         0%         23.4%         13.1%         62.0%         0%         39.4%         -           Lights and Motorcycles         97.3         353         11.37         62.0%         95.7%         0.6%         97.1%         93.3%         10.0%         94.6%         94.           % Lights and Motorcycles         97.0%         95.9%         10.0%         96.7%         0.5%         86.7%         0.6         97.1%         93.3%         10.0%         94.6%         94.           Heavy         23         15         0         38         19         41         0         60         10         54         0         64         -           % Bicryles on Road         11         0         0         1         0         1         0         3         -         10         54         0         6.5%         0.%         5.5%         0.0%         0.1%         0         0         1         -         2         10         0         0         1         0         1         0         1         0         3         -         0         3         -         0	% Approact	68.6%	31.3%	0.1%	-	-	57.2%	42.8%	)%	-	-	33.4%	66.5%	0.1%	-	-	
Lights and Motorcycles         78.3         35.3         1         1137         -         40.3         27.4         0         67.7         -         40.3         27.4         0         67.7         -         2.3         1         1137         -         40.3         27.4         0         67.7         -         2.1%         3.3%         100%         9.4.5%         -         2.2%         5.5%         65.7%         05.5%         65.7%         05.7%         0.5%         65.7%         0.5%         65.7%         0.5%         0.7%         0.7%         9.1%         9.3.3%         100%         9.4.6%         -         4.5%         1.0%         9.1%         0.3%         9.4.6%         -         4.5%         1.4%         0.60         -         10.0         54         0.6         64         -         55         55.8%         0.5%         0.4%         <	% Tota	25.6%	11.7%	0%	37.3%	-	13.4%	10.0%	)%	23.4 %	-	13.1%	26.2%	0%	39.4%	-	-
% Lights and Motorcycles         97.0%         95.9%         10.0%         96.7%         10.0%         91.7%         1.9%         10.0%         94.6%         94.           Heavy         2.3         15         0         3.8         19         4.1         0         60         10         5.4         0.0%         94.6%         94.           % Heavy         2.3%         1.5         0         3.2%         4.5%         13.0%         96.0%         8.1%         2.4%         6.5%         0.5%         5.1%	Lights and Motorcycle	783	353	1	1137	-	403	274	0	677	-	403	772	1	1176	-	2990
Heavy         23         15         0         38         -         19         41         0         60         -         10         54         0         64         -           % Brayy         2.9%         4.1%         0%         3.2%         -         4.5%         13.0%         6%         8.1%         -         2.4%         6.5%         0%         5.1%         -         5.           Bicycles on Road         1         0         0         1         -         0         1         -         2         1         0         3         -           % Bicycles on Road         0.1%         0%         0.1%         -         0.5%         0.1%         0%         0.2%         -         0         1         0         1         -         2         1         0         3         -         0         0.1%         0%         0.2%         -         0         0.2%         -         0         0         0.2%         -         0         0         0.2%         0         0         0.2%         -         0         0         0.2%         -         0         0         0.2%         0         0         0         0 <t< td=""><td>% Lights and Motorcycle</td><td>97.0%</td><td>95.9%</td><td>100%</td><td>96.7%</td><td>-</td><td>95.5%</td><td>86.7%</td><td>)%</td><td>91.7%</td><td>-</td><td>97.1%</td><td>93.3%</td><td>100%</td><td>94.6%</td><td>-</td><td>94.7%</td></t<>	% Lights and Motorcycle	97.0%	95.9%	100%	96.7%	-	95.5%	86.7%	)%	91.7%	-	97.1%	93.3%	100%	94.6%	-	94.7%
% He avy         2.9%         4.1%         0%         3.2%         -         4.5%         13.0%         %         8.1%         -         2.4%         6.5%         0%         5.1%         -         5.           Bicycles on Road         1         0         0         1         -         0         1         -         2         1         0         3         -           % Bicycles on Road         0.1%         0%         0.4%         -         0%         0.4%         0.1%         -         0.5%         0.1%         0         0         -         0         -         0         1         -         2         1         0         3         -           % Bicycles on Road         0.1%         0%         0.4%         0.1%         0         0.1%         0         0.5%         0.1%         0.2%         0.2%         0         0           Pedestrians         -         -         -         7         -         -         54         -         -         11	Heav	23	15	0	38	-	19	41	0	60	-	10	54	0	64	-	162
Bicycles on Road         1         0         0         1         -         0         1         0         1         -         2         1         0         3         -           % Bicycles on Road         0.1%         0%         0.1%         0%         0.3%         0%         0.1%         -         0.5%         0.1%         0.3%         0.2%         -         0.1%           Pedestrians         -         -         -         7         -         -         54         -         -         11	% He av	2.9%	4.1%	0%	3.2%	-	4.5%	13.0%	)%	8.1%	-	2.4%	6.5%	0%	5.1%	-	5.1%
% Bicycles on Road         0.1%         0%         0.1%         -         0%         0.3%         0%         0.1%         -         0.5%         0.1%         0%         0.2%         -         0.           Pedestrians         -         -         -         7         -         -         54         -         -         11	Bicycles on Roa	1	0	0	1	-	0	1	0	1	-	2	1	0	3	-	5
Pedestrians 7 54 11	% Bicycles on Roa	0.1%	0%	0%	0.1%	-	0%	0.3%	1%	0.1%	-	0.5%	0.1%	0%	0.2%	-	0.2%
	Pedestrian	-	-	-	-	7	-	-	-	-	54	-	-	-	-	11	

### CHILDREN'S HOSPITAL OF EASTERN ONTARIO (CHEO) 1DOOR4CARE PROJECT

Scoping

June 14, 2021



Figure 6 - 2021 Base Traffic Volumes – AM Peak Hour

### CHILDREN'S HOSPITAL OF EASTERN ONTARIO (CHEO) 1DOOR4CARE PROJECT

Scoping June 14, 2021

> ← 195 ∽ 85 Hospital Link Ring Road Road ٦ P 56  $\rightarrow$ 71 53 23 ⊸ 17 1 1 563 11 **√** 124 Ļ Ļ W Main Access 2 🗳 ľ ٦ ↑ 7 142 22 17 작 General Hospital S Main Access Parking Lots A / E Access 40 16 36 ^\_ 57 ^\_\_ ^\_\_ ^\_\_ 28 669 35 7 24 ← 135 53 45 ← 76 26 155 21 ← 85 Ļ Ţ ⊾ Ļ **√** 459 Ļ L Ļ Ļ Ļ L Ring Road 26 24 20 ٦ Î ľ \_\_↑ <u></u> ↑ ľ 114 53 62  $\rightarrow$ 70  $\rightarrow$ 10 38 155 123  $\rightarrow$ 85 Ring Road 7 ^\_ 21 163 ← 576 178 ← 1007 369 330 ← 662 3 Smyth Road ∽ L Ļ 146 ٦ 153 🗳 \_\_↑ ľ 792 → 766  $\rightarrow$ 5 1 6 🥆







# Appendix C – City of Ottawa Collision Data



Location: HIGHL	AND TER @ S	SMYTH RD							
Traffic Control: Sto	p sign						Total Collisions:	3	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Nov-09, Wed,15:11	Clear	SMV other	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Pedestrian	1
2017-May-17, Wed,16:06	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Nov-20, Fri,18:08	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					West	Overtaking	Police vehicle	Other motor vehicle	
Location: SMYTH	I RD @ GENE	RAL HOSPITAL E							
Traffic Control: Trat	ffic signal						Total Collisions:	18	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	· Vehicle type	First Event	No. Ped
2016-Sep-10, Sat,19:54	Clear	Turning movement	P.D. only	Dry	West	Making "U" turn	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Delivery van	Other motor vehicle	
2016-Oct-21, Fri,20:18	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Dec-09, Fri,08:57	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Dec-08, Fri,06:52	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jan-26, Fri,08:30	Clear	Rear end	P.D. only	Loose snow	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jun-27, Wed,07:32	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Location: SMYTH	I RD @ GENE	ERAL HOSPITAL E							
Traffic Control: Tra	ffic signal						Total Collisions:	: 18	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2018-Jul-06, Fri,07:29	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Oct-17, Wed,11:10	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-30, Fri,15:32	Clear	Turning movement	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jan-23, Wed,07:15	Snow	Sideswipe	Non-reportable	Packed snow	East	Changing lanes	Unknown	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-05, Thu,07:57	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-10, Tue,09:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - dump	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Unknown	Unknown	Other motor vehicle	
2019-Dec-14, Sat,22:42	Snow	SMV other	P.D. only	Packed snow	East	Going ahead	Automobile, station wagon	Pole (utility, power)	0
2019-Dec-20, Fri,16:22	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-15, Wed, 18:00	Clear	Rear end	P.D. only	Dry	South	Going ahead	Municipal transit bus	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-27, Mon,16:09	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Mar-03, Tue,11:30	Clear	Rear end	P.D. only	Loose snow	West	Going ahead	School van	Other motor vehicle	0
					West	Slowing or stopping	g Automobile, station wagon	Other motor vehicle	



Location: SMYTH	HRD @ GENE	RAL HOSPITAL E							
Traffic Control: Tra	ffic signal						Total Collisions:	18	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Mar-10, Tue,09:10	Rain	Sideswipe	P.D. only	Wet	East	Going ahead	Unknown	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
Location: SMYTH	HRD @ SOUT	H HAVEN PL/GEN	IERAL HOSPITAL	ENTRANCE	W				
Traffic Control:         Traffic signal         Total Collisions								17	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jun-10, Fri,09:15	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2016-Jul-07, Thu,11:24	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Sep-17, Sat,15:43	Rain	Rear end	Non-fatal injury	Wet	West	Going ahead	Municipal transit bus	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Dec-07, Wed,14:34	Clear	Sideswipe	Non-fatal injury	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-09, Fri,07:11	Snow	Rear end	P.D. only	lce	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Jan-27, Fri,09:43	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jun-27, Tue,12:44	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	



Traffic Control: Traffic signal         Total Collisions: 17           Date/Day/Time         Environment         Impact Type         Classification         Surface Surface 2017-Jun-27, Tue,1343         Rain         Turning movement         P.D. only         Wet         West         Turning left         Automobile, station wagon         Other motor vehicle         0           2017-Jun-27, Tue,1343         Rain         Turning movement         P.D. only         Wet         West         Turning left         Automobile, station wagon         Other motor vehicle         0           2017-Aug-06, Sun,19:50         Clear         Rear end         P.D. only         Dry         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2017-Nov-03, Fri,19:44         Clear         Turning movement         P.D. only         Dry         South         Going ahead         Automobile, station wagon         Other motor vehicle         0           2018-Nov-07, Wed, 18:00         Rain         Rear end         P.D. only         Wet         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Jan-07, Mon,08:35         Clear         Turning movement         P.D. only         Ket         Turning left         Passenger van         Other motor vehicle </th <th>Location: SMYTH</th> <th>I RD @ SOUT</th> <th>HAVEN PL/GEN</th> <th>IERAL HOSPITAL</th> <th>ENTRANCE</th> <th>W</th> <th></th> <th></th> <th></th> <th></th>	Location: SMYTH	I RD @ SOUT	HAVEN PL/GEN	IERAL HOSPITAL	ENTRANCE	W				
Date/Day/Time         Environment         Impact Type         Classification         Surface Condn         Veh. Dir         Vehicle Manoeuver Vehicle Hype         First Event         No. Ped           2017-Jun-27, Tue,13:43         Rain         Turning movement         P.D. only         Wet         West         Turning left         Automobile, station wagon         Other motor vehicle         0           2017-Jun-27, Tue,13:43         Rain         Turning movement         P.D. only         Dry         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2017-Nuo-03, Fri, 19:44         Clear         Turning movement         P.D. only         Dry         East         Stopped         Automobile, station wagon         Other motor vehicle         0           2017-Nov-03, Fri, 19:44         Clear         Turning movement         P.D. only         Dry         South         Going ahead         Automobile, station wagon         Other motor vehicle         0           2018-Nov-07, Wed, 18:00         Rain         Rear end         P.D. only         Wet         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Jan-07, Mon,08:35         Clear         Turning movement         P.D. only         Ice         West         <	Traffic Control: Trat	ffic signal						Total Collisions:	17	
2017-Jun-27, Tue, 13:43       Rain       Turning movement       P.D. only       Wet       West       Turning left       Automobile, station wagon       Other motor vehicle       0         2017-Aug-06, Sun, 19:50       Clear       Rear end       P.D. only       Dry       East       Going ahead       Pick-up truck       Other motor vehicle       0         2017-Aug-06, Sun, 19:50       Clear       Rear end       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2017-Nov-03, Fri, 19:44       Clear       Turning movement       P.D. only       Dry       South       Going ahead       Automobile, station wagon       Other motor vehicle       0         2018-Nov-07, Wed, 18:00       Rain       Rear end       P.D. only       Wet       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-22, Tue, 10:40       Clear       Angle       P.D. only       Pasked       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-22,	Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
East         Going ahead         Pick-up truck         Other motor vehicle           2017-Aug-06, Sun, 19:50         Clear         Rear end         P.D. only         Dry         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2017-Nov-03, Fri, 19:44         Clear         Turning movement         P.D. only         Dry         South         Going ahead         Automobile, station wagon         Other motor vehicle         0           2017-Nov-03, Fri, 19:44         Clear         Turning movement         P.D. only         Dry         South         Going ahead         Automobile, station wagon         Other motor vehicle         0           2018-Nov-07, Wed, 18:00         Rain         Rear end         P.D. only         Wet         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Jan-07, Mon,08:35         Clear         Turning movement         P.D. only         Ice         West         Turning left         Passenger van         Other motor vehicle         0           2019-Jan-22, Tue, 10:40         Clear         Angle         P.D. only         Packed         East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Aug-12, Mon,14:40	2017-Jun-27, Tue,13:43	Rain	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
2017-Aug-06, Sun, 19:50         Clear         Rear end         P.D. only         Dry         East East         Going ahead Stopped         Automobile, station wagon Automobile, station wagon         Other motor vehicle         0           2017-Nov-03, Fri, 19:44         Clear         Turning movement         P.D. only         Dry         South North         Going ahead Turning left         Automobile, station wagon         Other motor vehicle         0           2018-Nov-07, Wed, 18:00         Rain         Rear end         P.D. only         Wet         East         Going ahead Stopped         Automobile, station wagon         Other motor vehicle         0           2019-Jan-07, Mon,08:35         Clear         Turning movement         P.D. only         Ice         West         Turning left East         Going ahead Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Jan-07, Mon,08:35         Clear         Turning movement         P.D. only         Ice         West         Turning left East         Going ahead         Automobile, station wagon         Other motor vehicle         0           2019-Jan-22, Tue;10:40         Clear         Angle         P.D. only         Packed snow         East         Going ahead         Unknown         Other motor vehicle         0           2019-Aug-12, Mon,14:40 <td></td> <td></td> <td></td> <td></td> <td></td> <td>East</td> <td>Going ahead</td> <td>Pick-up truck</td> <td>Other motor vehicle</td> <td></td>						East	Going ahead	Pick-up truck	Other motor vehicle	
EastStoppedAutomobile, station wagonOther motor vehicle2017-Nov-03, Fri,19:44ClearTurning movementP.D. onlyDrySouthGoing aheadAutomobile, station wagonOther motor vehicle02018-Nov-07, Wed,18:00RainRear endP.D. onlyWetEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Jan-07, Mon,08:35ClearTurning movementP.D. onlyIceWestTurning leftPassenger vanOther motor vehicle02019-Jan-22, Tue,10:40ClearAngleP.D. onlyIceWestEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Jan-22, Tue,10:40ClearSideswipeP.D. onlyPacked snowEastGoing aheadUnknownOther motor vehicle02019-Nov-29, Fri,16:49ClearSideswipeP.D. onlyDryEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Nov-29, Fri,16:49ClearSideswipeP.D. onlyDryEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Nov-29, Fri,16:49ClearSideswipeP.D. onlyDryEastChanging lanesAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear endP.D. onlyDryEastChanging lanesAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear end<	2017-Aug-06, Sun,19:50	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
2017-Nov-03, Fri,19:44       Clear       Turning movement       P.D. only       Dry       South       Going ahead       Automobile, station wagon       Other motor vehicle       0         2018-Nov-07, Wed,18:00       Rain       Rear end       P.D. only       Wet       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2018-Nov-07, Wed,18:00       Rain       Rear end       P.D. only       Wet       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning left       Passenger van       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Passenger van       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-2						East	Stopped	Automobile, station wagon	Other motor vehicle	
NorthTurning leftBus (other)Other motor vehicle2018-Nov-07, Wed, 18:00RainRear endP.D. onlyWetEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Jan-07, Mon,08:35ClearTurning movementP.D. onlyIceWestTurning leftPassenger vanOther motor vehicle02019-Jan-22, Tue,10:40ClearAngleP.D. onlyPacked snowEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Aug-12, Mon,14:40ClearSideswipeP.D. onlyPacked snowEastGoing aheadUnknownOther motor vehicle02019-Aug-12, Mon,14:40ClearSideswipeP.D. onlyDryEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Nov-29, Fri, 16:49ClearSideswipeP.D. onlyDryEastGoing aheadAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear endP.D. onlyWetEastChanging lanesAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear endP.D. onlyWetEastChanging lanesAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear endP.D. onlyWetEastChanging lanesAutomobile, station wagonOther motor vehicle02019-Dec-04, Wed,09:50SnowRear endP.D. only <td>2017-Nov-03, Fri,19:44</td> <td>Clear</td> <td>Turning movement</td> <td>P.D. only</td> <td>Dry</td> <td>South</td> <td>Going ahead</td> <td>Automobile, station wagon</td> <td>Other motor vehicle</td> <td>0</td>	2017-Nov-03, Fri,19:44	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
2018-Nov-07, Wed, 18:00       Rain       Rear end       P.D. only       Wet       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning left       Passenger van       Other motor vehicle       0         2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning left       Passenger van       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Packed snow       East       Going ahead       Passenger van       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fr						North	Turning left	Bus (other)	Other motor vehicle	
East       Stopped       Automobile, station wagon       Other motor vehicle         2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning left       Passenger van       Other motor vehicle       0         2019-Jan-07, Mon,08:35       Clear       Angle       P.D. only       Packed       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Unknown       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Passenger van       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wag	2018-Nov-07, Wed, 18:00	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
2019-Jan-07, Mon,08:35       Clear       Turning movement       P.D. only       Ice       West       Turning left       Passenger van       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Jan-22, Tue,10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Unknown       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Passenger van       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50						East	Stopped	Automobile, station wagon	Other motor vehicle	
East       Going ahead       Automobile, station wagon       Other motor vehicle         2019-Jan-22, Tue, 10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Unknown       Other motor vehicle       0         2019-Jan-22, Tue, 10:40       Clear       Sideswipe       P.D. only       Packed snow       East       Going ahead       Unknown       Other motor vehicle       0         2019-Aug-12, Mon, 14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Aug-12, Mon, 14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri, 16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed, 09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed, 09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes <td>2019-Jan-07, Mon,08:35</td> <td>Clear</td> <td>Turning movement</td> <td>P.D. only</td> <td>lce</td> <td>West</td> <td>Turning left</td> <td>Passenger van</td> <td>Other motor vehicle</td> <td>0</td>	2019-Jan-07, Mon,08:35	Clear	Turning movement	P.D. only	lce	West	Turning left	Passenger van	Other motor vehicle	0
2019-Jan-22, Tue, 10:40       Clear       Angle       P.D. only       Packed snow       East snow       Going ahead       Unknown       Other motor vehicle       0         2019-Jan-22, Tue, 10:40       Clear       Angle       P.D. only       Packed snow       East       Going ahead       Unknown       Other motor vehicle       0         2019-Aug-12, Mon, 14:40       Clear       Sideswipe       P.D. only       Dry       East       Unknown       Unknown       Other motor vehicle       0         2019-Nov-29, Fri, 16:49       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri, 16:49       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>East</td> <td>Going ahead</td> <td>Automobile, station wagon</td> <td>Other motor vehicle</td> <td></td>						East	Going ahead	Automobile, station wagon	Other motor vehicle	
North       Going ahead       Passenger van       Other motor vehicle         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Unknown       Unknown       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         East       Going ahead       Automobile, station wagon       Other motor vehicle       0       0 <td>2019-Jan-22, Tue,10:40</td> <td>Clear</td> <td>Angle</td> <td>P.D. only</td> <td>Packed snow</td> <td>East</td> <td>Going ahead</td> <td>Unknown</td> <td>Other motor vehicle</td> <td>0</td>	2019-Jan-22, Tue,10:40	Clear	Angle	P.D. only	Packed snow	East	Going ahead	Unknown	Other motor vehicle	0
2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Unknown       Unknown       Other motor vehicle       0         2019-Aug-12, Mon,14:40       Clear       Sideswipe       P.D. only       Dry       East       Going ahead       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         East       Going ahead       Automobile, station wagon       Other motor vehicle       0       0						North	Going ahead	Passenger van	Other motor vehicle	
East       Going ahead       Automobile, station wagon       Other motor vehicle         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         East       Going ahead       Automobile, station wagon       Other motor vehicle       0	2019-Aug-12, Mon,14:40	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Nov-29, Fri,16:49       Clear       Sideswipe       P.D. only       Dry       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         2019-Dec-04, Wed,09:50       Snow       Rear end       P.D. only       Wet       East       Changing lanes       Automobile, station wagon       Other motor vehicle       0         East       Going ahead       Automobile, station wagon       Other motor vehicle       0						East	Going ahead	Automobile, station wagon	Other motor vehicle	
East Going ahead Automobile, station wagon Other motor vehicle 2019-Dec-04, Wed,09:50 Snow Rear end P.D. only Wet East Changing lanes Automobile, station wagon Other motor vehicle East Going ahead Automobile, station wagon Other motor vehicle	2019-Nov-29, Fri,16:49	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
2019-Dec-04, Wed,09:50 Snow Rear end P.D. only Wet East Changing lanes Automobile, station wagon Other motor vehicle 0 East Going ahead Automobile, station wagon Other motor vehicle						East	Going ahead	Automobile, station wagon	Other motor vehicle	
Fast Going ahead Automobile, station wagon. Other motor vehicle	2019-Dec-04, Wed,09:50	Snow	Rear end	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
						East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Sep-29, Tue, 19:59 Clear Turning movement Non-fatal injury Dry East Turning left Automobile, station wagon Other motor vehicle 0	2020-Sep-29, Tue,19:59	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
West Going ahead Automobile, station wagon Other motor vehicle						West	Going ahead	Automobile, station wagon	Other motor vehicle	



Traffic Control: No	control						Total Collisions:	3	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2017-Nov-15, Wed, 17:00	Rain	Sideswipe	P.D. only	Wet	East	Unknown	Unknown	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2018-Oct-03, Wed,23:50	Clear	Rear end	P.D. only	Dry	East	Pulling onto shoulder or toward curb	Automobile, station wagon	Other motor vehicle	0
					East	Overtaking	Police vehicle	Other motor vehicle	
2019-Apr-18, Thu,16:45	Clear	Sideswipe	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	
Location: SMYTH	RD btwn HIC	GHLAND TER & SC	OUTH HAVEN PL						
Traffic Control: No	control						Total Collisions:	2	
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped
2016-Mar-09, Wed, 19:13	Clear	Rear end	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Jun-30, Thu,13:14	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile station wagon	Other motor vehicle	



Appendix D – 2011 Origin-Destination Survey (Alta Vista)



### **Demographic Characteristics**

Population Employed Population Households	74,770 32,910 32,590	Actively Travelled Number of Vehicles Area (km <sup>2</sup> )		59,190 37,270 38.5
Occupation				
Status (age 5+)		Male	Female	Total
Full Time Employed		15,840	12,940	28,780
Part Time Employed		1,660	2,470	4,130
Student		8,130	8,750	16,870
Retiree		6,200	8,840	15,030
Unemployed		1,200	950	2,150
Homemaker		50	2,150	2,200
Other		630	900	1,530
Total:		33,700	36,990	70,700
Traveller Characteristics		Male	Female	Total
Transit Pass Holders		7,620	9,140	16,760
Licensed Drivers		25,060	24,810	49,870
Telecommuters		140	60	200
Trips made by residents		92,440	98,770	191,210



Household Size		
1 person	10,780	33%
2 persons	11,010	34%
3 persons	4,790	15%
4 persons	3,880	12%
5+ persons	2,130	7%
Total:	32,590	100%

Households by Vehicle Availability						
0 vehicles	6,320	19%				
1 vehicle	16,930	52%				
2 vehicles	8,030	25%				
3 vehicles	1,030	3%				
4+ vehicles	290	1%				
Total:	32,590	100%				

Households by Dwelling	Туре	
Single-detached	12,320	38%
Semi-detached	1,790	5%
Townhouse	4,700	14%
Apartment/Condo	13,780	42%
Total:	32,590	100%

Selected Indicators	
Daily Trips per Person (age 5+)	2.70
Vehicles per Person	0.50
Number of Persons per Household	2.29
Daily Trips per Household	5.87
Vehicles per Household	1.14
Workers per Household	1.01
Population Density (Pop/km2)	1940



#### Employed Population



\* In 2005 data was only collected for household members aged 11<sup>\*</sup> therefore these results cannot be compared to the 2011 data.



#### Travel Patterns

### Top Five Origins of Trips to Alta Vista

#### AM Peak Period



Summary of Trips to and from Alta Vista								
AM Peak Period (6:30 - 8:59)	Destinations of	(	Origins of					
	Trips From		Trips To					
Districts	District	% Total	District	% Total				
Ottawa Centre	4,180	10%	680	1%				
Ottawa Inner Area	4,970	12%	4,270	7%				
Ottawa East	1,940	5%	2,370	4%				
Beacon Hill	2,690	7%	1,850	3%				
Alta Vista	16,220	39%	16,220	27%				
Hunt Club	1,980	5%	7,990	13%				
Merivale	3,010	7%	3,690	6%				
Ottawa West	1,160	3%	1,550	3%				
Bayshore / Cedarview	830	2%	2,330	4%				
Orléans	1,050	3%	5,890	10%				
Rural East	110	0%	430	1%				
Rural Southeast	140	0%	1,550	3%				
South Gloucester / Leitrim	160	0%	1,970	3%				
South Nepean	460	1%	2,360	4%				
Rural Southwest	160	0%	690	1%				
Kanata / Stittsvile	660	2%	1,810	3%				
Rural West	20	0%	180	0%				
Île de Hull	710	2%	190	0%				
Hull Périphérie	360	1%	420	1%				
Plateau	0	0%	680	1%				
Aylmer	40	0%	480	1%				
Rural Northwest	40	0%	300	1%				
Pointe Gatineau	20	0%	740	1%				
Gatineau Est	220	1%	270	0%				
Rural Northeast	10	0%	320	1%				
Buckingham / Masson-Angers	10	0%	70	0%				
Ontario Sub-Total:	39,740	97%	55,830	94%				
Québec Sub-Total:	1,410	3%	3,470	6%				
Total:	41,150	100%	59,300	100%				

### Trips by Trip Purpose

24 Hours	From District		To District	W	ithin District/	
Work or related	22,370	15%	46,540	31%	10,770	13%
School	8,550	6%	8,090	5%	6,440	8%
Shopping	16,500	11%	16,600	11%	14,550	17%
Leisure	11,940	8%	13,340	9%	7,720	9%
Medical	2,990	2%	7,860	5%	2,380	3%
Pick-up / drive passenger	9,390	6%	9,900	6%	6,990	8%
Return Home	75,570	50%	44,070	29%	33,060	39%
Other	4,870	3%	6,050	4%	3,240	4%
Total:	152,180	100%	152,450	100%	85,150	100%
AM Peak (06:30 - 08:59)	From District		To District	w	/ithin District	
Work or related	13.920	56%	28.300	66%	5.390	33%
School	5,340	21%	7.330	17%	5.600	35%
Shopping	510	2%	530	1%	320	2%
Leisure	570	2%	990	2%	480	3%
Medical	500	2%	1,760	4%	460	3%
Pick-up / drive passenger	1,790	7%	2,490	6%	2,110	13%
Return Home	1,380	6%	730	2%	910	6%
Other	910	4%	940	2%	930	6%
Total:	24,920	100%	43,070	100%	16,200	100%
PM Peak (15:30 - 17:59)	From District		To District	w	/ithin District	
Work or related	820	2%	1,340	5%	740	4%
School	550	1%	90	0%	70	0%
Shopping	3,920	9%	3,630	13%	2,830	14%
Leisure	2,550	6%	2,440	9%	1,580	8%
Medical	260	1%	670	2%	300	2%
Pick-up / drive passenger	3,310	7%	2,550	9%	2,390	12%
Return Home	31,900	72%	15,950	57%	11,310	58%
Other	1,270	3%	1,230	4%	440	2%
Total:	44,580	100%	27,900	100%	19,660	100%
Peak Period (%)	Total:		% of 24 Hours	١	Within Distric	:t (%)
24 Hours	389,780				22%	
AM Peak Period	84,190		22%		19%	
PM Peak Period	92,140		24%		21%	

### Trips by Primary Travel Mode

24 Hours	From District		To District	Wi	thin District	
Auto Driver	92,240	61%	92,670	61%	43,390	51%
Auto Passenger	24,030	16%	24,040	16%	13,430	16%
Transit	27,890	18%	27,220	18%	6,520	8%
Bicycle	2,180	1%	2,110	1%	1,390	2%
Walk	1,440	1%	1,510	1%	15,170	18%
Other	4,420	3%	4,890	3%	5,260	6%
Total:	152,200	100%	152,440	100%	85,160	100%
AM Peak (06:30 - 08:59)	From District		To District	Wi	thin District	
Auto Driver	12,430	50%	26,810	62%	6,330	39%
Auto Passenger	3,040	12%	5,100	12%	2,500	15%
Transit	7,540	30%	7,300	17%	1,700	10%
Bicycle	750	3%	750	2%	340	2%
Walk	280	1%	280	1%	3,210	20%
Other	880	4%	2,850	7%	2,140	13%
Total:	24,920	100%	43,090	100%	16,220	100%
PM Peak (15:30 - 17:59)	From District		To District	Wi	thin District	
Auto Driver	28,570	64%	15,990	57%	9,640	49%
Auto Passenger	5,930	13%	4,230	15%	3,570	18%
Transit	7,460	17%	6,420	23%	1,500	8%
Bicycle	630	1%	610	2%	470	2%
Walk	340	1%	310	1%	3,280	17%
Other	1,660	4%	340	1%	1,210	6%
Total:	44,590	100%	27,900	100%	19,670	100%
Avg Vehicle Occupancy	From District		To District	Wi	thin District	
24 Hours	1.26		1.26		1.31	
AM Peak Period	1.24		1.19		1.39	
PM Peak Period	1.21		1.26		1.37	
Transit Modal Split	From District		To District	Wi	thin District	
24 Hours	19%		19%		10%	
AM Peak Period	33%		19%		16%	
PM Peak Period	18%		24%		10%	



Appendix E – Site Plan



5 4 9/21 BIM



Appendix F – Supportive TDM Development Design Checklist

### **TDM Measures Checklist:**

Non-Residential Developments (office, institutional, retail or industrial)

### Legend

BASIC The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER The measure could maximize support for users of sustainable modes, and optimize development performance

The measure is one of the most dependably effective tools to encourage the use of sustainable modes

	TDM	measures: Non-residential developments	Check if proposed & add descriptions
	1.	TDM PROGRAM MANAGEMENT	
	1.1	Program coordinator	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	X
	1.2	Travel surveys	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	
	2.	WALKING AND CYCLING	
	2.1	Information on walking/cycling routes & destin	ations
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances	X
	2.2	Bicycle skills training	
		Commuter travel	
BETTER ★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	
	2.3	Valet bike parking	
		Visitor travel	
BETTER	2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	

# TDM Measures Checklist

Version 1.0 (30 June 2017)

	TDM	measures: Non-residential developments	Check if proposed & add descriptions
	3.	TRANSIT	
	3.1	Transit information	
BASIC	3.1.1	Display relevant transit schedules and route maps at entrances	X
BASIC	3.1.2	Provide online links to OC Transpo and STO information	X
BETTER	3.1.3	Provide real-time arrival information display at entrances	
	3.2	Transit fare incentives	
		Commuter travel	
BETTER	3.2.1	Offer preloaded PRESTO cards to encourage commuters to use transit	
BETTER	★ 3.2.2	Subsidize or reimburse monthly transit pass purchases by employees	
		Visitor travel	
BETTER	3.2.3	Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	
	3.3	Enhanced public transit service	
		Commuter travel	
BETTER	3.3.1	Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	
		Visitor travel	
BETTER	3.3.2	Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	
	3.4	Private transit service	
		Commuter travel	
BETTER	3.4.1	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	
		Visitor travel	
BETTER	3.4.2	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	

	TDM	measures: Non-residential developments		Check if proposed & add descriptions
	4.	RIDESHARING		
	4.1	Ridematching service		
		Commuter travel		
BASIC	★ 4.1.1	Provide a dedicated ridematching portal at OttawaRideMatch.com	X	
	4.2	Carpool parking price incentives		
		Commuter travel		
BETTER	4.2.1	Provide discounts on parking costs for registered carpools		
	4.3	Vanpool service		
		Commuter travel		
BETTER	4.3.1	Provide a vanpooling service for long-distance commuters		
	5.	CARSHARING & BIKESHARING		
	5.1	Bikeshare stations & memberships		
BETTER	5.1.1	Contract with provider to install on-site bikeshare station for use by commuters and visitors		
		Commuter travel		
BETTER	5.1.2	Provide employees with bikeshare memberships for local business travel		
	5.2	Carshare vehicles & memberships		
		Commuter travel		
BETTER	5.2.1	Contract with provider to install on-site carshare vehicles and promote their use by tenants		
BETTER	5.2.2	Provide employees with carshare memberships for local business travel		
	6.	PARKING		
	6.1	Priced parking		
		Commuter travel		
BASIC	★ 6.1.1	Charge for long-term parking (daily, weekly, monthly)	X	
BASIC	6.1.2	Unbundle parking cost from lease rates at multi-tenant sites		
		Visitor travel	,	
BETTER	6.1.3	Charge for short-term parking (hourly)	X	

# **TDM Measures Checklist**

Version 1.0 (30 June 2017)

	TDM	measures: Non-residential developments	Check if proposed & add descriptions
	7.	TDM MARKETING & COMMUNICATIONS	
	7.1	Multimodal travel information	
		Commuter travel	
BASIC ★	7.1.1	Provide a multimodal travel option information package to new/relocating employees and students	X
		Visitor travel	
BETTER ★	7.1.2	Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	
	7.2	Personalized trip planning	
		Commuter travel	
BETTER ★	7.2.1	Offer personalized trip planning to new/relocating employees	
	7.3	Promotions	
		Commuter travel	
BETTER	7.3.1	Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	
	8.	OTHER INCENTIVES & AMENITIES	
	8.1	Emergency ride home	
		Commuter travel	
BETTER ★	8.1.1	Provide emergency ride home service to non-driving commuters	
	8.2	Alternative work arrangements	
		Commuter travel	
BASIC ★	8.2.1	Encourage flexible work hours	
BETTER	8.2.2	Encourage compressed workweeks	
BETTER ★	8.2.3	Encourage telework	
	8.3	Local business travel options	
		Commuter travel	
BASIC ★	8.3.1	Provide local business travel options that minimize the need for employees to bring a personal car to work	
	8.4	Commuter incentives	
		Commuter travel	
BETTER	8.4.1	Offer employees a taxable, mode-neutral commuting allowance	
	8.5	On-site amenities	
		Commuter travel	
BETTER	8.5.1	Provide on-site amenities/services to minimize mid-day or mid-commute errands	X



Appendix G – Detailed Segment MMLOS Calculation

#### Appendix G

		Hospital Link	CHEO Access Road	Emergency Access Road	General Hospital Access Road	Smyth Road	Ring Road (N-S)	Ring Road (E-W)
	Sidewalk Wdith	2.0 or more	2.0 or more	2.0 or more	2.0 or more	1.8m	2.0 or more	No sidewalk
_	Boulevard Width	0m	0m	0m	0m	0m	0m	0m
'ian	Average Daily Curb Lane Traffic Volume	<3000 vpd	<3000 vpd	<3000 vpd	<3000 vpd	>3000 vpd	<3000 vpd	<3000 vpd
esti	On-street Parking	No	No	No	No	No	No	Yes
bed	Operating Speed	50km/h	50km/h	50km/h	50km/h	50km/h	50km/h	40km/h
	Level of Service	В	В	В	В	С	В	F
	Target	С	С	C	C	С	С	С
	Road Classification	Local	Local	Local	Local	Arterial	Local	Local
	Bike Route Classification	N/A	N/A	N/A	N/A	Spine Route	N/A	N/A
	Type of Bikeway	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed
list	Travel Lanes	2	2	2	2	4	2	2
Cyc	Centerline Markings	No	Yes	No	No	Yes	Yes	Yes
	Operating Speed	50km/h	50km/h	50km/h	50km/h	50km/h	50km/h	40km/h
	Level of Service	В	В	В	В	В	В	В
	Target	В	В	В	В	В	В	В
	Facility Type	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed
	Friction/Congestion/Incident Potential	Limited	Limited	Limited	Limited	Limited	Limited	Limited
nsit	Level of Service	D	D	D	D	D	D	E
Tra	Target	D	D	D	D	D	D	D
	Lane Width	3.5m to 3.7m	3.5m to 3.7m	3.5m to 3.7m	3.5m to 3.7m	3.3m to 3.5m	3.5m to 3.7m	3.5m to 3.7m
	Travel Lanes	1	1	1	1	2	1	1
сk	Level of Service	С	С	С	С	В	С	С
Tru	Target	E	E	E	E	E	E	Ε



Appendix H – Detailed Intersection MMLOS Calculation

Appendix H

	Intersection	Smytl	h Road/R	ing Road	(N-S)	Smyth Hospit	Road/G	eneral s Road
	Legs	NORTH	SOUTH	EAST	WEST	NORTH	EAST	WEST
	Island Refuge	Yes	No	No	No	Yes	Yes	No
	Lanes	3	2	4	4	4	4	4
	Conflicting Left Turns	permitted	permitted	no left turn	protected	permitted	permitted	protected
	Conflicting Right Turns	permitted	permitted	permitted	permitted	protected	permitted	no right turn
	Right Turn on Red	yes	yes	yes	yes	no	yes	N/A
an	Pedestrian Leading Interval	no	no	no	no	no	no	no
stria	Parallel Radius	15m to 25m	15m to 25m	15m to 25m				
des	Parallel Channel	no channel	no channel	no channel	no channel	no channel	no channel	no channel
Pe	Perpendicular Radius	15m to 25m	15m to 25m	15m to 25m				
	Crosswalk Type	standard	standard	standard	standard	standard	standard	standard
	PETSI Score	72	88	58	62	65	57	57
	Delay Score	37	37	34	34	34	28	28
	Level of Service	D	D	D	D	D	С	С
	Target		(	C			С	
	Type of Bikeway	mixed traffic	mixed traffic	mixed traffic				
	Turning Speed	slow	slow	slow	slow	slow	slow	slow
	Right Turn Storage	25m-50m	25m-50m	25m-50m	25m-50m	25m-50m	25m-50m	25m-50m
	Dual Right Turn Lanes	No	No	No	No	No	No	No
st	Shared Through-Right Lane	No	No	No	No	No	No	No
/cli	Bike Box	No	No	No	No	No	No	No
Ú	Lanes Crossed	1	1	1	1	1	1	1
	Dual Left Turn Lanes	No	No	No	No	No	No	No
	Approach Speed	50 km/h	50 km/h	50 km/h				
	Level of Service	D	D	D	D	D	D	D
	Target			3			В	
t	Average Signal Delay	54.5	0.4	7.7	8.8	46.6	17.8	7.4
insi	Level of Service	F	А	В	В	F	С	В
Tra	Target		I	)			D	
	Turning Radius	10-15m	< 10m	10-15m	10-15m	10-15m	>15m	N/A
	Receiving Lanes	2	1	2	2	2	2	2
ick	Level of Service	А	F	А	А	А	А	-
1 L	Target			)			D	



Appendix I – Detailed Synchro Report

### 2022 Existing Conditions AM Peak Hour

	-	$\mathbf{r}$	-	+	1	1						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR						
Lane Configurations	1.			÷.	Y							
Traffic Volume (vph)	241	117	34	72	36	87						
Future Volume (vph)	241	117	34	72	36	87						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5						
Grade (%)	0%			0%	0%							
Storage Length (m)		0.0	0.0		0.0	0.0						
Storage Lanes		0	0		1	0						
Taper Length (m)			7.6		7.6							
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Ped Bike Factor												
Frt	0.956				0.904							
Flt Protected				0.984	0.986							
Satd. Flow (prot)	1668	0	0	1717	1555	0						
Flt Permitted				0.984	0.986							
Satd. Flow (perm)	1668	0	0	1717	1555	0						
Link Speed (k/h)	50			50	50							
Link Distance (m)	396.5			285.4	334.8							
Travel Time (s)	28.5			20.5	24.1							
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90						
Growth Factor	100%	100%	100%	100%	100%	100%						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%						
Bus Blockages (#/hr)	0	0	0	0	0	0						
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%	0%							
Adj. Flow (vph)	268	130	38	80	40	97						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	398	0	0	118	137	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(m)	0.0			0.0	3.5	-						
Link Offset(m)	0.0			0.0	0.0							
Crosswalk Width(m)	4.9			4.9	4.9							
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09						
Turning Speed (k/h)		14	24		24	14						
Sign Control	Stop			Stop	Stop							
Intersection Summary												
Area Type: (	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizat	ion 44.7%			IC	CU Level	of Service A						
Analysis Period (min) 15												
	۶	-	$\mathbf{F}$	4	+	*	•	Ť	۲	1	Ŧ	~
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (vph)	2	0	19	106	0	32	21	511	99	26	72	4
Future Volume (vph)	2	0	19	106	0	32	21	511	99	26	72	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.877			0.968			0.979			0.995	
Flt Protected		0.996			0.963			0.998			0.987	
Satd. Flow (prot)	0	1524	0	0	1627	0	0	1705	0	0	1714	0
Flt Permitted		0.996			0.963			0.998			0.987	
Satd. Flow (perm)	0	1524	0	0	1627	0	0	1705	0	0	1714	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		65.7			55.2			169.5			334.8	
Travel Time (s)		4.7			4.0			12.2			24.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	21	118	0	36	23	568	110	29	80	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	154	0	0	701	0	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24	-	14	24	-	14	24	-	14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized							_					
Intersection Capacity Utilizati	on 58.5%			IC	CU Level	of Service	в					
Analysis Period (min) 15												

	-	•	T.	1	•	Ŧ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		1⇒			र्स
Traffic Volume (vph)	58	14	617	130	32	165
Future Volume (vph)	58	14	617	130	32	165
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%		0%			0%
Storage Length (m)	0.0	0.0		0.0	0.0	
Storage Lanes	1	0		0	0	
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.973		0.977			
Flt Protected	0.962					0.992
Satd. Flow (prot)	1633	0	1705	0	0	1731
Flt Permitted	0.962					0.992
Satd. Flow (perm)	1633	0	1705	0	0	1731
Link Speed (k/h)	50		50			50
Link Distance (m)	109.2		52.2			169.5
Travel Time (s)	7.9		3.8			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	64	16	686	144	36	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	830	0	0	219
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5	<b>J</b> .	0.0	<u> </u>		0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.9		4.9			4.9
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	tion 53.6%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ፈቴ			ፈጉ			\$		5	4	
Traffic Volume (vph)	362	763	2	1	556	103	6	0	0	28	0	119
Future Volume (vph)	362	763	2	1	556	103	6	0	0	28	0	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.977						0.850	
Flt Protected		0.984						0.950		0.950		
Satd, Flow (prot)	0	3263	0	0	3239	0	0	1658	0	1658	1483	0
Flt Permitted	-	0.603	-	-	0.954	-	-	0.534	-	0.753		-
Satd, Flow (perm)	0	1999	0	0	3090	0	0	932	0	1314	1483	0
Right Turn on Red	•		Yes	•		Yes	•		Yes			Yes
Satd Flow (RTOR)					19						588	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		446 7			395.2			147 1			52.2	
Travel Time (s)		32.2			28.5			10.6			3.8	
Confl Peds (#/hr)		UL.L			20.0			10.0			0.0	
Confl Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	Ŭ	Ű	Ű	Ŭ	Ű	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ű	Ű
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adi Flow (vph)	402	848	2	1	618	114	7	0	0	31	0	132
Shared Lane Traffic (%)	102	010	_	•	010	•••	•	•	Ŭ	•	Ū	102
Lane Group Flow (vph)	0	1252	0	0	733	0	0	7	0	31	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No.	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	Lon	3.5	i agin	2011	3.5	ragin	Lon	3.5	rugin	2011	3.5	i agin
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane								1.0				
Headway Eactor	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09
Turning Speed (k/h)	24		14	24	1.00	14	24	1.00	14	24	1.00	14
Number of Detectors	1	2	••	1	2	••	1	2	••	1	2	••
Detector Template	l eft	Thru		l eft	Thru		Left	Thru		l eft	Thru	
Leading Detector (m)	61	30.5		61	30.5		61	30.5		61	30.5	
Trailing Detector (m)	0.1	0.0		0.1	0.0		0.1	0.0		0.1	0.0	
	nm+nt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1 0111	6			4			8	
Permitted Phases	2	2		6	0		4	т		8	0	
Detector Phase	5	2		6	6		- 4	4		8	8	
Switch Phase	v	-		v	v					Ŭ	v	

2022 Existing Conditions 4: Smyth Road & Ring Rd (N-S)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.0	31.0		31.0	31.0	
Total Split (s)	42.0	84.0		42.0	42.0		31.0	31.0		31.0	31.0	
Total Split (%)	36.5%	73.0%		36.5%	36.5%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	36.6	78.3		36.3	36.3		25.5	25.5		25.5	25.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		91.2			91.2			12.6		12.6	12.6	
Actuated g/C Ratio		0.79			0.79			0.11		0.11	0.11	
v/c Ratio		0.79			0.30			0.07		0.22	0.19	
Control Delay		12.7			5.5			44.0		48.2	0.6	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		12.7			5.5			44.0		48.2	0.6	
LOS		В			А			D		D	А	
Approach Delay		12.7			5.5			44.0			9.7	
Approach LOS		В			А			D			А	
Queue Length 50th (m)		56.8			12.0			1.5		6.7	0.0	
Queue Length 95th (m)		#160.0			56.4			5.2		14.2	0.0	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1585			2454			206		291	786	
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		0.79			0.30			0.03		0.11	0.17	
Area Type: Cvcle Length: 115	Other											
Actuated Cycle Length: 11	5											
Offset: 35 (30%), Reference	ed to phase	2:EBTL	and 6:WE	BTL. Start	of Green							
Natural Cycle: 100				,								
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.79												
Intersection Signal Delay:	10.1			Ir	ntersectio	n LOS: B						
Intersection Capacity Utilization	ation 75.6%	)		[(	CU Level	of Service	e D					
Analysis Period (min) 15												

2022 Existing Conditions 4: Smyth Road & Ring Rd (N-S)

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

#### Splits and Phases: 4: Smyth Road & Ring Rd (N-S)



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		च	1⇒		¥	
Traffic Volume (vph)	38	124	69	81	36	3
Future Volume (vph)	38	124	69	81	36	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.927		0.991	
Fit Protected	•	0.988	1010	•	0.956	•
Satd. Flow (prot)	0	1/24	1618	0	1653	0
Fit Permitted	•	0.988	1010	•	0.956	<u>^</u>
Satd. Flow (perm)	0	1724	1618	0	1653	0
Link Speed (K/h)		50	50		50	
LINK DIStance (M)		109.2	130.9		57.7	
Capfl Dada (#/br)		7.9	9.4		4.Z	
Confl. Peus. (#/III)						
Peak Hour Factor	0 00	0 00	0 00	0 00	0 00	0 00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2,0	2 /0	2 /0 0	270	270	0
Parking (#/hr)	U	U	U	U	U	U
Mid-Block Traffic (%)		0%	0%		0%	
Adi, Flow (vph)	42	138	77	90	40	3
Shared Lane Traffic (%)	14				10	v
Lane Group Flow (vph)	0	180	167	0	43	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0	<u> </u>	3.5	0
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: 0	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 31.5%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्स	î.∍		¥	
Traffic Volume (vph)	132	53	69	51	20	21
Future Volume (vph)	132	53	69	51	20	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.943		0.931	
Flt Protected		0.966			0.976	
Satd. Flow (prot)	0	1686	1646	0	1586	0
Flt Permitted		0.966			0.976	
Satd. Flow (perm)	0	1686	1646	0	1586	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		130.9	158.0		74.3	
Travel Time (s)		9.4	11.4		5.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		00/	00/		00/	
Mid-Block Traffic (%)	4 4 7	0%	0%		0%	00
Adj. Flow (vph)	147	59	77	57	22	23
Shared Lane Traffic (%)	•	000	101	•		•
Lane Group Flow (vph)	0	206	134	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Lett	Lett	Lett	Right	Left	Right
Median Width(m)		0.0	0.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane	4.00	4.00	4.00	4 00	4 00	4.00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	_	_	14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: 0	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 27.3%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			4			\$			\$	
Traffic Volume (vph)	16	35	22	173	23	7	132	157	516	21	141	10
Future Volume (vph)	16	35	22	173	23	7	132	157	516	21	141	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.960			0.995			0.913			0.992	
Flt Protected		0.989			0.959			0.992			0.994	
Satd. Flow (prot)	0	1657	0	0	1665	0	0	1581	0	0	1721	0
Flt Permitted		0.989			0.959			0.992			0.994	
Satd. Flow (perm)	0	1657	0	0	1665	0	0	1581	0	0	1721	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.0			97.8			54.4			67.4	
Travel Time (s)		11.4			7.0			3.9			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	18	39	24	192	26	8	147	174	573	23	157	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	226	0	0	894	0	0	191	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizati	on 88.1%			IC	CU Level	of Service	εE					
Analysis Period (min) 15												

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations	5	**	**	1	ካካ	1	
Traffic Volume (vph)	378	536	687	427	133	203	
Future Volume (vph)	378	536	687	427	133	203	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)		0%	0%	0.0	0%	0.0	
Storage Length (m)	60.0	0,0	0,0	175 0	0.0	0.0	
Storage Lanes	1			1	2	1	
Taper Length (m)	30.0			•	76	•	
Lane Util Factor	1 00	0.95	0.95	1 00	0.97	1 00	
Ped Bike Factor	1.00	0.00	0.00	1.00	0.01	1.00	
Frt				0 850		0 850	
Flt Protected	0.950			0.000	0 950	0.000	
Satd Flow (prot)	1658	3316	3316	1/83	3216	1/183	
Elt Permitted	0.077	3310	3310	1403	0 050	1405	
Satd Flow (norm)	193	3216	3216	1/02	3016	1/93	
Dight Turn on Pod	400	3310	5510	1403 Voc	5210	1403 Voo	
Sate Flow (DTOD)				105		165	
Jink Speed (k/h)		50	50	4/4	EO	29	
Link Speed (k/n)		205.2	UC		UC EAA		
LINK DIStance (m)		395.Z	413.0		54.4		
Travel Time (s)		28.5	29.8		3.9		
Confil. Peds. (#/nr)							
Contil. Bikes (#/nr)	0.00	0.00	0.00	0.00	0.00	0.00	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
	100%	100%	100%	100%	100%	100%	
Heavy venicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/nr)	0	0	0	0	0	0	
Parking (#/nr)		00/	00/		00/		
Mid-Block Traffic (%)	400	0%	0%	474	0%	000	
Adj. Flow (vph)	420	596	763	4/4	148	226	
Shared Lane Traffic (%)	100			<i>i</i> = <i>i</i>			
Lane Group Flow (vph)	420	596	763	474	148	226	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		3.5	3.5		7.0		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		4.9	4.9		4.9		
Two way Left Turn Lane							
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	NA	pm+ov	custom	pm+ov	
Protected Phases	5	2	6	4	4	5	3
Permitted Phases	2			6	3	43	
Detector Phase	5	2	6	4	4	5	
Switch Phase							

2022 Existing Conditions8: Smyth Road & General Hospital Access Rd

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	10.0	
Minimum Split (s)	23.9	24.4	41.4	11.1	11.1	23.9	32.0	
Total Split (s)	28.0	70.0	42.0	13.0	13.0	28.0	32.0	
Total Split (%)	24.3%	60.9%	36.5%	11.3%	11.3%	24.3%	28%	
Maximum Green (s)	22.1	63.6	35.6	6.9	6.9	22.1	28.0	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	
All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.9	6.4	6.4	6.1	6.1	5.9		
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	None	None	None	
Walk Time (s)			7.0				7.0	
Flash Dont Walk (s)			28.0				21.0	
Pedestrian Calls (#/hr)			0				0	
Act Effct Green (s)	92.2	91.7	59.3	76.6	10.8	43.4		
Actuated g/C Ratio	0.80	0.80	0.52	0.67	0.09	0.38		
v/c Ratio	0.64	0.23	0.45	0.41	0.49	0.39		
Control Delay	13.8	3.3	19.8	2.0	54.5	22.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	13.8	3.3	19.8	2.0	54.5	22.0		
LOS	В	А	В	А	D	С		
Approach Delay		7.7	13.0		34.9			
Approach LOS		А	В		С			
Queue Length 50th (m)	20.2	13.4	54.0	0.0	16.5	30.3		
Queue Length 95th (m)	m63.4	24.1	84.8	12.2	25.9	42.4		
Internal Link Dist (m)		371.2	389.8		30.4			
Turn Bay Length (m)	60.0			175.0				
Base Capacity (vph)	661	2643	1711	1145	303	588		
Starvation Cap Reductn	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0		
Reduced v/c Ratio	0.64	0.23	0.45	0.41	0.49	0.38		
Intersection Summary								
Area Type:	Other							
Cycle Length: 115								
Actuated Cycle Length: 11	5							
Offset: 43 (37%), Reference	ced to phase	2:EBTL	and 6:WE	BT, Start o	of Green			
Natural Cycle: 110								
Control Type: Actuated-Co	oordinated							
Maximum v/c Ratio: 0.64								
Intersection Signal Delay:	14.1			Ir	ntersectio	n LOS: B		
Intersection Capacity Utiliz	ation 61.7%	1		10	CU Level	of Service	B	
Analysis Period (min) 15								

2022 Existing Conditions8: Smyth Road & General Hospital Access Rd

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

#### Splits and Phases: 8: Smyth Road & General Hospital Access Rd



	-	$\mathbf{r}$	1	-	1	1
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4			र्भ	Y	
Traffic Volume (vph)	241	117	34	72	36	87
Future Volume (vph)	241	117	34	72	36	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)		0.0	0.0		0.0	0.0
Storage Lanes		0	0		1	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.956				0.904	
Flt Protected				0.984	0.986	
Satd. Flow (prot)	1668	0	0	1717	1555	0
Flt Permitted				0.984	0.986	
Satd. Flow (perm)	1668	0	0	1717	1555	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	396.5			285.4	334.8	
Travel Time (s)	28.5			20.5	24.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	v	Ŭ.	,	v	,	v
Mid-Block Traffic (%)	0%			0%	0%	
Adi Flow (vph)	268	130	38	80	40	97
Shared Lane Traffic (%)	200	100	00	00	ν	01
Lane Group Flow (vph)	398	0	0	118	137	٥
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	l off	Right	l off	l off	l off	Right
Median Width(m)		Tight	Leit	0.0	25	Ngn
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.0			1.0	1.0	
Two way L off Turn L one	4.9			4.9	4.9	
Hoodway Leit Turri Larie	1.00	1.00	1.00	1.00	1.00	1.00
	1.09	1.09	1.09	1.09	1.09	1.09
Furthing Speed (K/N)	Ctor.	14	24	C+	24	14
Sign Control	Stop			Stop	Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	ation 44.7%			IC	CU Level	of Service A
Analysis Period (min) 15						

Lane Group         EBL         EBT         EBR         WBL         WBT         WBR         NBL         NBR         SBL         SBR         SBR           Lane Configurations         - <t< th=""><th></th><th>≯</th><th>-</th><th><math>\mathbf{i}</math></th><th>4</th><th>+</th><th>*</th><th>1</th><th>Ť</th><th>۲</th><th>1</th><th>Ŧ</th><th>~</th></t<>		≯	-	$\mathbf{i}$	4	+	*	1	Ť	۲	1	Ŧ	~
Lane Configurations         4         4         4         4         4         4           Traffic Volume (vph)         2         0         19         106         0         32         21         511         99         26         72         4           Ideal Flow (vphp)         1800<	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Solume (vph)         2         0         19         106         0         32         21         511         99         26         72         4           Future Volume (vph)         2         0         19         106         0         32         21         511         99         26         72         4           Ideal Flow (vphip)         1800         180         180         180         180         180         180         180         180         180         180         180         180         180         180         180         180 </td <td>Lane Configurations</td> <td></td> <td>4</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> <td>4</td> <td></td>	Lane Configurations		4			4			4			4	
Future Volume (vph)         2         0         19         106         0         32         21         511         99         26         72         44           ideal Flow (vphpl)         1800         100         1.00 <td< td=""><td>Traffic Volume (vph)</td><td>2</td><td>0</td><td>19</td><td>106</td><td>0</td><td>32</td><td>21</td><td>511</td><td>99</td><td>26</td><td>72</td><td>4</td></td<>	Traffic Volume (vph)	2	0	19	106	0	32	21	511	99	26	72	4
Ideal Flow (vphpl)         1800         100         1000         1000 <td>Future Volume (vph)</td> <td>2</td> <td>0</td> <td>19</td> <td>106</td> <td>0</td> <td>32</td> <td>21</td> <td>511</td> <td>99</td> <td>26</td> <td>72</td> <td>4</td>	Future Volume (vph)	2	0	19	106	0	32	21	511	99	26	72	4
Lane Width (m) 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)         0%         0%         0%         0%         0%           Storage Length (m)         0.0	Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Storage Length (m)         0.0	Grade (%)		0%			0%			0%			0%	
Storage Lanes         0         <	Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Taper Length (m)         7.6         7.6         7.6         7.6           Lane Util, Factor         1.00         1.0	Storage Lanes	0		0	0		0	0		0	0		0
Lane Uhi, Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Taper Length (m)	7.6			7.6			7.6			7.6		
Ped Bike Factor Fit 0.877 0.968 0.979 0.995 Satd. Flow (prot) 0 1524 0 0 1627 0 0 1705 0 0 1714 0 FIt Permitted 0.996 0.963 0.988 0.987 Satd. Flow (perm) 0 1524 0 0 1627 0 0 1705 0 0 1714 0 Link Speed (k/h) 50 50 50 50 Link Distance (m) 65.7 55.2 169.5 334.8 Travel Time (s) 4.7 4.0 12.2 24.1 Confl. Bikes (#hr) Confl. Bikes (#hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt         0.877         0.968         0.979         0.995           FIt Protected         0.996         0.963         0.998         0.987           Satk. Flow (prot)         0         1524         0         0         1627         0         0         1705         0         0         1714         0           Fit Permitted         0.996         0.963         0.998         0.987         0         1714         0           Satk. Flow (perm)         0         1524         0         0         1627         0         0         1714         0           Link Distance (m)         65.7         552         169.5         3334.8         1           Travel Time (s)         4.7         4.0         12.2         24.1         1           Confl. Bikes (#hr)         0         0.90 </td <td>Ped Bike Factor</td> <td></td>	Ped Bike Factor												
FIP Protected       0.996       0.963       0.998       0.987         Satd. Flow (prot)       0       1524       0       0       1627       0       0       1705       0       0       1714       0         FIP Permitted       0.996       0.963       0.998       0.987       Satd. Flow (perm)       0       1524       0       0       1627       0       0       1705       0       0       1714       0         Link Distance (m)       65.7       55.2       169.5       334.8       Travel Time (s)       4.7       4.0       12.2       24.1       24.1         Confl. Bikes (#hr)          74.0       100%	Frt		0.877			0.968			0.979			0.995	
Satd. Flow (prot)       0       1524       0       0       1627       0       0       1705       0       0       1714       0         Fit Permitted       0.996       0.963       0.998       0.998       0.987         Satd. Flow (perm)       0       1524       0       0       1627       0       0       1705       0       0       1714       0         Link Speed (k/h)       50 <t< td=""><td>Flt Protected</td><td></td><td>0.996</td><td></td><td></td><td>0.963</td><td></td><td></td><td>0.998</td><td></td><td></td><td>0.987</td><td>-</td></t<>	Flt Protected		0.996			0.963			0.998			0.987	-
FIP Fermitted       0.996       0.963       0.998       0.998       0.987         Satd. Flow (perm)       0       1524       0       0       1627       0       0       1705       0       0       1714       0         Link Speed (k/h)       50	Satd. Flow (prot)	0	1524	0	0	1627	0	0	1705	0	0	1714	0
Satid. Flow (perm)         0         1524         0         0         1627         0         0         1714         0           Link Speed (k/h)         50	Flt Permitted		0.996			0.963			0.998			0.987	-
Link Speed (k/h) 50 50 50 50 50 50 Link Distance (m) 65.7 55.2 169.5 334.8 Travel Time (s) 4.7 4.0 12.2 24.1 Confl. Bikes (#/hr) Confl. Bikes (#/hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Satd. Flow (perm)	0	1524	0	0	1627	0	0	1705	0	0	1714	0
Link Distance (m) 65.7 55.2 169.5 334.8 Travel Time (s) 4.7 4.0 12.2 24.1 Confl. Peds. (#/hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Link Speed (k/h)		50			50			50			50	
Travel Time (s)       4.7       4.0       12.2       24.1         Confi. Peds. (#/hr)       Confi. Bikes (#/hr)            Peak Hour Factor       0.90 <t< td=""><td>Link Distance (m)</td><td></td><td>65.7</td><td></td><td></td><td>55.2</td><td></td><td></td><td>169.5</td><td></td><td></td><td>334.8</td><td></td></t<>	Link Distance (m)		65.7			55.2			169.5			334.8	
Confl. Peds. (#/hr)         Confl. Bikes (#/hr)         Peak Hour Factor       0.90       1.09       1.09       1.09	Travel Time (s)		4.7			4.0			12.2			24.1	
Confl. Bikes (#/hr)         Peak Hour Factor       0.90       1.90       1.09       1.90	Confl. Peds. (#/hr)												
Peak Hour Factor       0.90       0.91       0.91       0.91       0.9	Confl. Bikes (#/hr)												
Growth Factor         100%	Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)       2%       2	Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Bus Blockages (#/hr)       0	Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Parking (#/nr)       Mid-Block Traffic (%)       0%       0%       0%       0%         Adj. Flow (vph)       2       0       21       118       0       36       23       568       110       29       80       4         Shared Lane Traffic (%)       0       0       154       0       0       701       0       0       113       0         Eane Group Flow (vph)       0       23       0       0       154       0       0       701       0       0       113       0         Enter Blocked Intersection       No       No <td>Bus Blockages (#/hr)</td> <td>0</td>	Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block frame (%)       0%       0%       0%       0%       0%       0%         Adj. Flow (vph)       2       0       21       118       0       36       23       568       110       29       80       4         Shared Lane Traffic (%)	Parking (#/hr)		00/			00/			00/			00/	
Adj. Flow (vpn)       2       0       21       118       0       36       23       568       110       29       80       4         Shared Lane Traffic (%)       Lane Group Flow (vph)       0       23       0       0       154       0       0       701       0       0       113       0         Enter Blocked Intersection       No       No <t< td=""><td>MID-BIOCK TRATTIC (%)</td><td>0</td><td>0%</td><td>04</td><td>440</td><td>0%</td><td>00</td><td>00</td><td>0%</td><td>440</td><td>00</td><td>0%</td><td>4</td></t<>	MID-BIOCK TRATTIC (%)	0	0%	04	440	0%	00	00	0%	440	00	0%	4
Shared Lane Train(%)       0       23       0       0       154       0       0       701       0       0       113       0         Enter Blocked Intersection       No       <	Adj. Flow (vpn)	2	0	21	118	0	30	23	568	110	29	80	4
Lane Group Flow (vpn)         0         23         0         0         154         0         0         701         0         0         113         0           Enter Blocked Intersection         No         No <td>Shared Lane Traffic (%)</td> <td>0</td> <td>00</td> <td>^</td> <td>•</td> <td>454</td> <td>^</td> <td>0</td> <td>704</td> <td>^</td> <td>•</td> <td>440</td> <td>0</td>	Shared Lane Traffic (%)	0	00	^	•	454	^	0	704	^	•	440	0
Enter Blocked Intersection         No         No <th< td=""><td>Lane Group Flow (vpn)</td><td>U</td><td>23</td><td>U</td><td>U</td><td>154</td><td>U</td><td>U</td><td>701</td><td>U</td><td>U</td><td>113</td><td>U</td></th<>	Lane Group Flow (vpn)	U	23	U	U	154	U	U	701	U	U	113	U
Lane Alignment         Left         Left         Right	Enter Blocked Intersection	NO	NO	N0	NO	NO	NO District	NO	NO	N0	NO	NO	NO Diauhat
Median Width(m)         0.0         0.0         0.0         0.0         0.0           Link Offset(m)         0.0         0.0         0.0         0.0         0.0         0.0           Crosswalk Width(m)         4.9         4.9         4.9         4.9         4.9           Two way Left Turn Lane	Lane Alignment	Len	Left	Right	Len	Lett	Right	Leπ	Len	Right	Lett	Left	Right
Link Onset(m)         0.0         0.0         0.0         0.0         0.0           Crosswalk Width(m)         4.9         4.9         4.9         4.9         4.9           Two way Left Turn Lane         Headway Factor         1.09 <td>Viedian Vildtn(m)</td> <td></td> <td>0.0</td> <td></td> <td></td> <td>0.0</td> <td></td> <td></td> <td>0.0</td> <td></td> <td></td> <td>0.0</td> <td></td>	Viedian Vildtn(m)		0.0			0.0			0.0			0.0	
Crosswark Width(III)       4.9       4.9       4.9       4.9       4.9         Two way Left Turn Lane       Headway Factor       1.09       <	LINK Offset(m)		0.0			0.0			0.0			0.0	
Headway Factor       1.09<	Crosswalk width(m)		4.9			4.9			4.9			4.9	
Turning Speed (k/h)         24         14         24         24         24         24         24         24 <td>Two way Leit Turri Lane</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>1 00</td> <td>1.00</td> <td>1 00</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td>1.00</td>	Two way Leit Turri Lane	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1 00	1.00	1.00	1.00	1.00
Intersection Summary     Other       Control     Other		1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Intersection Summary Area Type: Other Control Type: Unsignalized	Furning Speed (K/II)	24	Stop	14	24	Stop	14	24	Stop	14	24	Stop	14
Intersection Summary Area Type: Other Control Type: Unsignalized	Sign Control		Stop			Stop			Stop			Stop	
Area Type: Other Control Type: Unsignalized	Intersection Summary												
Control Lype: Unsignalized	Area Type: C	uner											
Interneting Connected Hill action 50 50/	Control Type: Unsignalized							D					
Intersection Capacity Offization 50.5% ICO Level Of Service B	Intersection Capacity Utilizati	011 20.5%			IC	JU Level	OF SERVICE	. D					

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		£			र्स
Traffic Volume (vph)	58	14	617	130	32	165
Future Volume (vph)	58	14	617	130	32	165
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%		0%			0%
Storage Length (m)	0.0	0.0		0.0	0.0	
Storage Lanes	1	0		0	0	
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.973		0.977			
Flt Protected	0.962					0.992
Satd. Flow (prot)	1633	0	1705	0	0	1731
Flt Permitted	0.962					0.992
Satd. Flow (perm)	1633	0	1705	0	0	1731
Link Speed (k/h)	50		50			50
Link Distance (m)	109.2		52.2			169.5
Travel Time (s)	7.9		3.8			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	64	16	686	144	36	183
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	830	0	0	219
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5	J	0.0	Ŭ		0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.9		4.9			4.9
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	ation 53.6%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		đ î b			đЪ			4		5	ĥ	
Traffic Volume (vph)	362	763	2	1	556	103	6	0	0	28	0	119
Future Volume (vph)	362	763	2	1	556	103	6	0	0	28	0	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0	- / -	0.0	0.0		0.0	0.0	- / -	0.0	0.0	- / -	0.0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (m)	76		•	76		•	76		•	76		•
Lane Util Factor	0.95	0.95	0.95	0.95	0.95	0.95	1 00	1 00	1 00	1 00	1 00	1 00
Ped Bike Factor	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0 977						0 850	
Fit Protected		0 984			0.011			0 950		0 950	0.000	
Satd Flow (prot)	٥	3263	٥	٥	3030	٥	٥	1658	٥	1658	1/183	٥
Elt Permitted	U	0.603	U	U	0.05/	U	U	0.534	U	0 753	1405	U
Sate Flow (parm)	٥	1000	٥	٥	3000	٥	٥	0.004	٥	1214	1/02	٥
Bight Turn on Rod	U	1999	Voc	0	2090	Voc	0	932	Voc	1314	1405	Voc
Sata Elow (PTOP)			res		26	res			Tes		240	res
Jink Snood (k/h)		50			20			50			549	
Link Speed (k/n)		UC 7			205.0			UC			0C	
		440.7			395.Z			147.1			5Z.Z	
Fravel Time (S)		3Z.Z			28.5			10.6			3.8	
Confl. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	402	848	2	1	618	114	7	0	0	31	0	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1252	0	0	733	0	0	7	0	31	132	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	_		6			4			8		
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase	-	_		-						-		

2022 Existing Conditions 4: Smyth Road & Ring Rd (N-S)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.5	31.5		31.5	31.5	
Total Split (s)	16.0	78.0		62.0	62.0		37.0	37.0		37.0	37.0	
Total Split (%)	13.9%	67.8%		53.9%	53.9%		32.2%	32.2%		32.2%	32.2%	
Maximum Green (s)	10.6	72.3		56.3	56.3		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		91.2			91.2			12.6		12.6	12.6	
Actuated g/C Ratio		0.79			0.79			0.11		0.11	0.11	
v/c Ratio		0.79			0.30			0.07		0.22	0.28	
Control Delay		12.7			11.2			44.0		48.2	1.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		12.7			11.2			44.0		48.2	1.5	
LOS		В			В			D		D	А	
Approach Delay		12.7			11.2			44.0			10.4	
Approach LOS		В			В			D			В	
Queue Length 50th (m)		56.8			22.2			1.5		6.7	0.0	
Queue Length 95th (m)		#160.0			90.3			5.2		14.2	0.0	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1585			2456			255		359	659	
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		0.79			0.30			0.03		0.09	0.20	
Intersection Summary												
Area Type:	Other											
Actuated Cycle Length: 11	5											
Offect: 35 (30%) Reference	od to nhase		and 6.WE	TI Start	of Groon							
Natural Cycle: 100	eu lo pliase	Z.LDIL		JTL, Start	of Green							
Control Type: Actuated Co	ordinated											
Maximum v/c Patio: 0.70	orunateu											
Intersection Signal Delay: 1	12 1			l.	ntersection							
Intersection Canacity Litilizy	ation 75.6%			11		of Service	n م					
Analysis Period (min) 15	allor 73.070											

2022 Existing Conditions 4: Smyth Road & Ring Rd (N-S) # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

#### Splits and Phases: 4: Smyth Road & Ring Rd (N-S)



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		થ	<b>₽</b>		¥	
Traffic Volume (vph)	38	124	69	81	36	3
Future Volume (vph)	38	124	69	81	36	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.927		0.991	
Flt Protected		0.988			0.956	
Satd. Flow (prot)	0	1724	1618	0	1653	0
Flt Permitted		0.988			0.956	
Satd. Flow (perm)	0	1724	1618	0	1653	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		109.2	130.9		57.7	
Travel Time (s)		7.9	9.4		4.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		00/	00/		00/	
MId-Block Traffic (%)	10	0%	0%		0%	•
Adj. Flow (vph)	42	138	77	90	40	3
Shared Lane Traffic (%)	•	100	107	•	10	•
Lane Group Flow (vph)	0	180	167	0	43	0
Enter Blocked Intersection	No	No	No	NO	No	NO
Lane Alignment	Lett	Lett	Lett	Right	Lett	Right
ivieulan width(m)		0.0	0.0		3.5	
		0.0	0.0		0.0	
		4.9	4.9		4.9	
Hoodwoy Easter	1.00	1.00	1.00	1.00	1.00	1.00
	1.09	1.09	1.09	1.09	1.09	1.09
Sign Control	24	Eroo	Eroo	14	Ctop	14
		FIEE	FIEE		Stop	
Intersection Summary	Other					
Area Type:	Uther					
Interpretion Consider Little	tion 24 50/					of Convice A
Analysis Deried (min) 45	uon 51.5%			IC	O Level (	DI SEIVICE A

	٦	-	-	*	1	-
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		÷.	1,		Y	
Traffic Volume (vph)	132	53	69	51	20	21
Future Volume (vph)	132	53	69	51	20	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.943		0.931	
Flt Protected		0.966			0.976	
Satd. Flow (prot)	0	1686	1646	0	1586	0
Flt Permitted		0.966			0.976	
Satd. Flow (perm)	0	1686	1646	0	1586	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		130.9	158.0		74.3	
Travel Time (s)		9.4	11.4		5.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	147	59	77	57	22	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	206	134	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	ation 27.3%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			4			4			4	
Traffic Volume (vph)	16	35	22	173	23	7	132	157	516	21	141	10
Future Volume (vph)	16	35	22	173	23	7	132	157	516	21	141	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.960			0.995			0.913			0.992	
Flt Protected		0.989			0.959			0.992			0.994	
Satd. Flow (prot)	0	1657	0	0	1665	0	0	1581	0	0	1721	0
Flt Permitted		0.989			0.959			0.992			0.994	
Satd. Flow (perm)	0	1657	0	0	1665	0	0	1581	0	0	1721	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		158.0			97.8			54.4			67.4	
Travel Time (s)		11.4			7.0			3.9			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	18	39	24	192	26	8	147	174	573	23	157	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	226	0	0	894	0	0	191	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	•	14	24	-	14	24	_	14	24		14
Sign Control		Stop			Stop			Free			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizati	on 88.1%			IC	CU Level	of Service	ε					
Analysis Period (min) 15												

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations	*	**	**	1	88	1	
Traffic Volume (voh)	378	536	687	427	133	203	
Future Volume (vph)	378	536	687	427	133	203	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0.0	0%	0%	0.0	0%	0.0	
Storage Length (m)	60.0	070	070	175.0	0.0	0.0	
Storage Lanes	1			1/0.0	2	1	
Taper Length (m)	30.0				76		
Lane Litil Factor	1 00	0 95	0 95	1 00	0.97	1 00	
Ped Bike Factor	1.00	0.00	0.00	1.00	0.01	1.00	
Frt				0 850		0 850	
Elt Protected	0.950			0.000	0 950	0.000	
Satd Flow (prot)	1658	3316	3316	1483	3216	1483	
Elt Permitted	0 170	0010	0010	1400	0 950	1400	
Satd Flow (nerm)	312	3316	3316	1483	3216	1483	
Right Turn on Red	512	0010	0010	1403 Voc	5210	Vac	
Satd Flow (RTOR)				105		13	
Link Speed (k/h)		50	50	4/4	50	40	
Link Distance (m)		395.2	413.8		51 A		
Travel Time (s)		28.5	20.2		24.4		
Confl Peds (#/hr)		20.5	23.0		5.3		
Confl Rikes (#/hr)							
Peak Hour Factor	0 90	0 90	0 90	0 90	0 90	0 90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Rus Blockages (#/hr)	/	270	270	ر <u>م</u>	2 /0 0	270	
Parking (#/hr)	U	U	0	0	0	U	
Mid-Block Traffic (%)		0%	0%		0%		
Adi Flow (vnh)	420	596	763	474	148	226	
Shared Lane Traffic (%)	420		100	7/4	140	220	
Lane Group Flow (vph)	420	596	763	474	148	226	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left		Right		Right	
Median Width(m)	Leit	2 5	2 5	right	70	Right	
Link Offset(m)		0.0	0.0		1.0		
Crosswalk Width(m)		0.0 / Q	10		0.0 / Q		
Two way Left Turn Lane		4.3	4.3		4.3		
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00	
Turning Speed (k/b)	24	1.09	1.09	1.09	1.09	1/	
Number of Detectors	24	ŋ	C	14	24	14	
Number of Detectors	ا ۲۰۴۰	Z	Z	Dicht	l off	l Diabt	
Loading Detector (m)	Leit G 1	20 5	20 E	Right 6 1	Leit	RIGHT	
Trailing Detector (III)	0.1	30.5	30.5	0.1	0.1	0.1	
Training Detector (m)	0.0	0.0	0.0	0.0	U.U	0.0	
Turn Type	pm+pt	NA	NA	pm+ov	custom	pm+ov	2
Protected Phases	5	2	б	4	4	5	3
Permilled Phases	2	0	6	0	3	43	
Switch Phase	5	2	Ö	4	4	5	
Crosswalk Width(m) Two way Left Turn Lane Headway Factor Turning Speed (k/h) Number of Detectors Detector Template Leading Detector (m) Trailing Detector (m) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase	1.09 24 1 Left 6.1 0.0 pm+pt 5 2 5	4.9 1.09 2 Thru 30.5 0.0 NA 2 2	4.9 1.09 2 Thru 30.5 0.0 NA 6 6	1.09 14 1 Right 6.1 0.0 pm+ov 4 6 4	4.9 1.09 24 1 Left 6.1 0.0 custom 4 3 4	1.09 14 1 Right 6.1 0.0 pm+ov 5 4 3 5	3

2022 Existing Conditions8: Smyth Road & General Hospital Access Rd

	∕	-	-	•	- <b>&gt;</b>	-		
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.9	24.4	41.4	11.1	11.1	10.9	29.3	
Total Split (s)	12.0	55.0	43.0	28.0	28.0	12.0	32.0	
Total Split (%)	10.4%	47.8%	37.4%	24.3%	24.3%	10.4%	28%	
Maximum Green (s)	6.1	48.6	36.6	21.9	21.9	6.1	25.7	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	6.1	6.0	5.9		
l ead/l ag	l ead	0.1	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	30	3.0	3.0	3.0	3.0	3.0	
Minimum Gan (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	Min	C-May	C-Max	None	None	Min	None	
Walk Time (s)	11111		7 0	NUTR	NUTIC	171111	7 0	
Flash Dont Walk (s)			28.0				16.0	
Pedestrian Calls (#/br)			20.0				10.0	
	9 98	86.1	10	57.0	16.4	60.5	10	
Actuated a/C Patio	00.0	0.1	42.2	0.50	0.14	00.5		
Nolualeu y/C Nalio	0.75	0.75	0.57	0.50	0.14	0.00		
Control Dolov	0.02	5.0	22.7	0.40	127	12.20		
	23.0	0.9	32.7	2.1	43.7	13.0		
Queue Delay	0.0	5.0	0.0	0.0	12 7	12 0		
	23.0	5.9	32.1	Z.1	43.7	13.0 D		
LUS Approach Dalay	U	42.2	21.2	A	05 G	D		
Approach LOS		13.3	21.2		20.0			
Approach LOS	11 1	40.0	С СС Б	0.0	16.5	04.4		
Queue Length Soth (m)	41.1	13.3	00.0	0.0	10.5	24.4		
Queue Length 95th (m)	m#135.1	32.9	101.6	9.1	18.3	32.5		
	60.0	3/1.2	309.0	175.0	30.4			
Dage Conceits (m)	00.0	0400	4040	1/5.0	770	700		
Dase Capacity (Vpn)	6/9	2483	1218	1082	//0	799		
Starvation Cap Reductin	0	0	0	0	U	U		
Spillback Cap Reductin	0	0	0	0	0	U		
Storage Cap Reductin	0	0	0	0	0 40	0 00		
Reduced V/C Ratio	0.62	0.24	0.63	0.44	0.19	0.28		
Intersection Summary	01							
Area Type:	Other							
Cycle Length: 115								
Actuated Cycle Length: 1	15			-				
Offset: 59 (51%), Referen	ced to phase	2:EBTL	and 6:WE	31, Start o	ot Green			
Natural Cycle: 105								
Control Type: Actuated-C	oordinated							
Maximum v/c Ratio: 0.63								
Intersection Signal Delay:	18.8			Ir	ntersectio	n LOS: B	_	
Intersection Capacity Utili	zation 61.7%	)		(	CU Level	of Service	В	
Analysis Period (min) 15								

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

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

Splits and Phases: 8: Smyth Road & General Hospital Access Rd



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4			स	Y	
Traffic Volume (vph)	241	170	34	72	63	87
Future Volume (vph)	241	170	34	72	63	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)		0.0	0.0		0.0	0.0
Storage Lanes		0	0		1	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.944				0.922	
Flt Protected				0.984	0.979	
Satd. Flow (prot)	1647	0	0	1717	1575	0
Flt Permitted				0.984	0.979	
Satd. Flow (perm)	1647	0	0	1717	1575	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	396.5			285.4	325.9	
Travel Time (s)	28.5			20.5	23.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	268	189	38	80	70	97
Shared Lane Traffic (%)						
Lane Group Flow (vph)	457	0	0	118	167	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0	•		0.0	3.5	Ū
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	
Intersection Summary					-	
	Other					
Control Type: Unsignalized						
Intersection Canacity Litiliza	tion /0 7%			IC		of Service A
Analysis Period (min) 15	10011 <del>-</del> J.1 /0			IC.		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (vph)	2	0	19	32	0	10	21	560	30	8	143	4
Future Volume (vph)	2	0	19	32	0	10	21	560	30	8	143	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.877			0.968			0.993			0.997	
Flt Protected		0.996			0.963			0.998			0.997	
Satd. Flow (prot)	0	1524	0	0	1627	0	0	1729	0	0	1735	0
Flt Permitted		0.996			0.963			0.998			0.997	
Satd. Flow (perm)	0	1524	0	0	1627	0	0	1729	0	0	1735	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.9			57.3			178.5			325.9	
Travel Time (s)		6.0			4.1			12.9			23.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		00/			0.0/			00/			00/	
Mid-Block Traffic (%)	0	0%	04	00	0%		00	0%	00	•	0%	
Adj. Flow (vph)	2	0	21	36	0	11	23	622	33	9	159	4
Shared Lane Traffic (%)	0	00	0	0	47	•	•	070	0	•	470	0
Lane Group Flow (vph)	0	23	0	U	47	U	0	6/8	U	0	172	0
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
		0.0			0.0			0.0			0.0	
		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Iwo way Leπ Iurn Lane	1.00	1.00	1.00	1.00	1.00	4 00	4 00	1.00	4.00	4.00	1.00	1.00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (K/n)	24	Ctor	14	24	Ctor	14	24	Ctor	14	24	Ctor	14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized							_					
Intersection Capacity Utilizati	on 56.1%			IC	CU Level	of Service	B					
Analysis Period (min) 15												

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		f,			स	
Traffic Volume (vph)	91	63	617	174	103	165	
Future Volume (vph)	91	63	617	174	103	165	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0%		0%			0%	
Storage Length (m)	0.0	0.0		0.0	0.0		
Storage Lanes	1	0		0	0		
Taper Length (m)	7.6				7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt	0.945		0.970				
Flt Protected	0.971					0.981	
Satd. Flow (prot)	1601	0	1693	0	0	1712	
Flt Permitted	0.971					0.981	
Satd. Flow (perm)	1601	0	1693	0	0	1712	
Link Speed (k/h)	50		50			50	
Link Distance (m)	109.2		52.2			178.5	
Travel Time (s)	7.9		3.8			12.9	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	101	70	686	193	114	183	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	171	0	879	0	0	297	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.5		0.0	Ŭ		0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.9		4.9			4.9	
Two way Left Turn Lane							
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	24	14		14	24		
Sign Control	Stop		Free			Free	
Intersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utiliza	tion 80.0%			IC	CU Level	of Service	; D
Analysis Period (min) 15							

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ፈጉ			ፈጉ			\$		ሻ	ĥ	
Traffic Volume (vph)	406	778	2	1	567	103	6	0	0	28	0	152
Future Volume (vph)	406	778	2	1	567	103	6	0	0	28	0	152
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (m)	7.6		-	7.6		-	7.6		-	7.6		-
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.977						0 850	
Flt Protected		0.983			0.011			0 950		0.950	0.000	
Satd Flow (prot)	0	3259	0	0	3239	0	0	1658	0	1658	1483	0
Elt Permitted	U	0 594	U	Ū	0 954	U	U	0.387	U	0 753	1400	U
Satd Flow (nerm)	0	1970	0	0	3090	0	0	675	0	1314	1483	0
Right Turn on Red	U	1570	Ves	U	0000	Ves	0	0/0	Ves	1014	1400	Ves
Satd Flow (RTOR)			163		10	163			163		586	163
Link Speed (k/b)		50			50			50			50	
Link Opeed (K/II)		116 7			305.2			1/7 1			52.2	
Travel Time (c)		32.2			28.5			10.6			3.2	
Confl Dode (#/br)		JZ.Z			20.5			10.0			5.0	
Confl. Peus. (#/III)												
Conii. Dikes (#/iii) Dook Hour Eastor	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0 00
Growth Easter	100%	10.90	10.90	100%	100%	100%	10.90	10.90	100%	100%	10.90	10.90
	100 /0 20/	00 /0 00/	100 /o 20/	100 /o 20/	100 /o 20/	20/	20/	20/	100 /o 20/	100 /o 20/	100 /0 20/	20/
Pue Pleekegee (#/br)	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0
Dus Diockages (#/III)	0	0	0	0	0	0	0	0	0	0	0	0
Mid Plock Troffic (9/)		00/			00/			00/			00/	
Milu-Diock Hallic (70)	151	0%	C	1	620	111	7	0%	٥	21	0%	160
Auj. Flow (vpl)	401	004	2	I	030	114	1	U	U	31	0	109
Shared Lane Trailic (%)	٥	1017	٥	٥	745	0	0	7	٥	21	160	٥
Lane Group Flow (vpn)	U	1317	U	U	/45	U	U	/	U	31	109	U
Enter Blocked Intersection	INO	INO	N0 Diatet	INO	INO	NO Dialat	INO	INO	NO Dialat	INO	INO	N0 Diatet
Lane Alignment	Len	Len	Right	Len	Len	Right	Leit	Len	Right	Len	Len	Right
Iviedian vvidtn(m)		3.5			3.5			3.5			3.5	
		0.0			0.0			0.0			0.0	
Crosswalk vvidtn(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4 00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (K/n)	24	0	14	24	0	14	24	0	14	24	•	14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	I hru		Left	Ihru		Left	Ihru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Iurn Iype	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		_	6			4		_	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase												

2024 Background Conditions 4: Smyth Road & Ring Rd (N-S)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.0	31.0		31.0	31.0	
Total Split (s)	42.0	84.0		42.0	42.0		31.0	31.0		31.0	31.0	
Total Split (%)	36.5%	73.0%		36.5%	36.5%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	36.6	78.3		36.3	36.3		25.5	25.5		25.5	25.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		91.2			91.2			12.6		12.6	12.6	
Actuated g/C Ratio		0.79			0.79			0.11		0.11	0.11	
v/c Ratio		0.89dl			0.30			0.10		0.22	0.25	
Control Delay		15.4			7.0			45.7		48.2	0.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		15.4			7.0			45.7		48.2	0.9	
LOS		В			А			D		D	А	
Approach Delay		15.4			7.0			45.7			8.2	
Approach LOS		В			А			D			А	
Queue Length 50th (m)		67.2			12.8			1.5		6.7	0.0	
Queue Length 95th (m)		#195.9			72.6			5.3		14.2	0.0	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1562			2454			149		291	784	
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		0.84			0.30			0.05		0.11	0.22	
Intersection Summary	01											
Area Type:	Other											
Cycle Length: 115	~											
Actuated Cycle Length: 11	5											
Unset: 35 (30%), Reference	ced to phase	EZEBIL		STL, Start	of Green							
Natural Cycle: 110	a a alla a fa al											
Maximum v/c Datias 0.04	ordinated											
Interportion Cianal Data	10.1				tore +!							
Intersection Signal Delay:	12.1			lí		of Society						
Analysis Period (min) 15	alion 79.3%			10	JU Level	OL SELVICE	υ					

2024 Background Conditions 4: Smyth Road & Ring Rd (N-S) # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

#### Splits and Phases: 4: Smyth Road & Ring Rd (N-S)



	۶	-	-	•	1	∢
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		च	î.∍		¥	
Traffic Volume (vph)	11	187	151	24	11	1
Future Volume (vph)	11	187	151	24	11	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.981		0.990	
Flt Protected		0.997		-	0.956	_
Satd. Flow (prot)	0	1740	1712	0	1652	0
Flt Permitted		0.997		-	0.956	_
Satd. Flow (perm)	0	1740	1712	0	1652	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		109.2	130.9		57.7	
Iravel Time (s)		7.9	9.4		4.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy venicies (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	U	U	U	U	U	U
Parking (#/nr)		00/	00/		00/	
IVIIU-BIOCK I FATTIC (%)	10	0%	0%	07	0%	1
Auj. Flow (Vpn)	12	208	168	27	12	1
Snared Lane Traffic (%)	0	220	105	0	40	0
Lane Group Flow (Vpn)	U	220	195	U	13	U
Enter Blocked Intersection	INO	INO	INO	INO Diabt	INO	IN0 Diabt
	Len	Leit	Leit	Right		Right
link Offset(m)		0.0	0.0		3.5 0.0	
Crosswalk Width(m)		0.0	1.0		0.0	
		4.3	4.3		4.3	
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00
Turning Speed (k/h)	24	1.03	1.03	14	24	14
Sign Control	24	Free	Free	14	Ston	14
		1166	1100		otop	
Intersection Summary	Other					
Control Type: Unsignalized						
Intersection Consolity Litilized	tion 20 00/			IC		of Sonvice
Analysis Period (min) 15	uun 23.3 /0			IC.		

	٦	-	+	•	1	1
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		÷.	1,		Y	
Traffic Volume (vph)	26	222	111	10	4	4
Future Volume (vph)	26	222	111	10	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989		0.932	
Flt Protected	-	0.995		-	0.976	-
Satd. Flow (prot)	0	1736	1726	0	1587	0
Fit Permitted	-	0.995		-	0.976	-
Satd. Flow (perm)	0	1736	1726	0	1587	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		130.9	64.8		106.6	
Iravel Time (s)		9.4	4.7		7.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
	100%	100%	100%	100%	100%	100%
Heavy venicies (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	U	U	U	U	U	U
Parking (#/nr)		00/	00/		00/	
IVIIU-BIOCK I FATTIC (%)	00	0%	0%		0%	4
Auj. Flow (vpn)	29	247	123	11	4	4
Shared Lane Traffic (%)	0	076	101	0	0	0
Lane Group Flow (Vpn)	U	2/0	134	U	Ŏ	U
Enter Blocked Intersection	INO	INO	INO	INO Diaht	INO	INO Diabt
	Leit	Leit	Leit	Right		Right
link Offeet(m)		0.0	0.0		0.0 0.0	
Crosswalk Width(m)		0.0	0.0		0.0	
Two way Left Turn Long		4.9	4.9		4.9	
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00
	1.09	1.09	1.09	1.09	2/	1/
Sign Control	24	Fraa	Froo	14	Stop	14
			1166		Stop	
Intersection Summary	011					
Area Type:	Other					
Control Type: Unsignalized						(0)
Intersection Capacity Utiliza	tion 34.0%			IC	CU Level	ot Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (vph)	16	35	96	173	23	7	196	157	516	21	141	10
Future Volume (vph)	16	35	96	173	23	7	196	157	516	21	141	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.912			0.995			0.920			0.992	
Flt Protected		0.995			0.959			0.989			0.994	
Satd, Flow (prot)	0	1584	0	0	1665	0	0	1588	0	0	1721	0
Flt Permitted	-	0.995			0.959			0.989	-	-	0.994	-
Satd, Flow (perm)	0	1584	0	0	1665	0	0	1588	0	0	1721	0
Link Speed (k/h)	-	50	-	-	50	-	-	50	-	-	50	-
Link Distance (m)		93.1			97.8			54.4			67.4	
Travel Time (s)		6.7			7.0			3.9			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	Ŭ	Ű	Ű	Ŭ	Ŭ	Ű	Ű	Ŭ	Ŭ	Ŭ	Ű	Ū
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adi Flow (vph)	18	39	107	192	26	8	218	174	573	23	157	11
Shared Lane Traffic (%)	10	00	101	102	20	Ŭ	210	.,,,	010	20	107	••
Lane Group Flow (vph)	0	164	0	0	226	0	0	965	0	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
	l off	l off	Right	Left	Left	Right	l off	Left	Right	Left	l off	Right
Median Width(m)	Lon	0.0	rugin	Lon	0.0	rugni	Lon	0.0	rugin	Lon	0.0	rugin
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		0.0 / Q			/ 0			0.0 / Q			0.0 / Q	
Two way Left Turn Lane		ч.5			4.5			4.5			ч.5	
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Turning Speed (k/b)	24	1.09	1.09	24	1.05	1.09	1.09	1.09	1.03	24	1.09	1.03
Sign Control	24	Stop	14	24	Stop	14	24	Stop	14	24	Stop	14
Intersection Summary												
Area Type: (	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizat	ion 97.6%			IC	CU Level	of Service	• F					
Analysis Period (min) 15												

	٦	-	-	•	1	1		
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Lane Configurations	*	**	**	1	**	1	~*	
Traffic Volume (vph)	368	437	701	482	187	174		
Future Volume (vph)	368	437	701	482	187	174		
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800		
Lane Width (m)	35	3 5	3.5	3 5	35	35		
Grade (%)	0.0	0%	0.0	0.0	0.0	0.0		
Storage Length (m)	60.0	070	070	175 0	0.0	0.0		
Storage Lanes	1			1	2	1		
Taper Length (m)	30.0			•	76	•		
Lane Util Factor	1 00	0.95	0.95	1 00	0.97	1 00		
Ped Bike Factor	1.00	0.00	0.00	1.00	0.01	1.00		
Frt				0 850		0 850		
Flt Protected	0.950			0.000	0.950	0.000		
Satd, Flow (prot)	1658	3316	3316	1483	3216	1483		
Elt Permitted	0.264	0010	0010		0.950	1100		
Satd. Flow (perm)	461	3316	3316	1483	3216	1483		
Right Turn on Red		0010	0010	Yes	0210	Yes		
Satd, Flow (RTOR)				536		37		
Link Speed (k/h)		50	50		50	01		
Link Distance (m)		395.2	413.8		54.4			
Travel Time (s)		28.5	29.8		3.9			
Confl. Peds. (#/hr)		_0.0	20.0		0.0			
Confl. Bikes (#/hr)								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Growth Factor	100%	100%	100%	100%	100%	100%		
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%		
Bus Blockages (#/hr)	0	0	0	0	0	0		
Parking (#/hr)								
Mid-Block Traffic (%)		0%	0%		0%			
Adj. Flow (vph)	409	486	779	536	208	193		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	409	486	779	536	208	193		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(m)		3.5	3.5	Ū.	7.0	J.		
Link Offset(m)		0.0	0.0		0.0			
Crosswalk Width(m)		4.9	4.9		4.9			
Two way Left Turn Lane								
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09		
Turning Speed (k/h)	24			14	24	14		
Number of Detectors	1	2	2	1	1	1		
Detector Template	Left	Thru	Thru	Right	Left	Right		
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1		
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0		
Turn Type	pm+pt	NA	NA	pm+ov	custom	pm+ov		
Protected Phases	5	2	6	4	4	5	3	
Permitted Phases	2			6	3	43		
Detector Phase	5	2	6	4	4	5		
Switch Phase								

2024 Background Conditions 8: Smyth Road & General Hospital Access Rd Synchro 11 Report Page 10

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	10.0	
Minimum Split (s)	23.9	24.4	41.4	11 1	11 1	23.9	32.0	
Total Split (s)	28.0	70.0	42.0	13.0	13.0	28.0	32.0	
Total Split (%)	24.3%	60.9%	36.5%	11.3%	11.3%	24.3%	28%	
Maximum Green (s)	22.1	63.6	35.6	6.9	6.9	22.1	28.0	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	
All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
Total Lost Time (s)	5.9	6.4	6.4	6.1	6.0	5.9		
Lead/Lag	l ead	0.1	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	30	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	None	None	None	
Walk Time (s)		C Mux	7.0	110110	110110		7.0	
Flash Dont Walk (s)			28.0				21.0	
Pedestrian Calls (#/hr)			0				0	
Act Effct Green (s)	89 7	89.2	57 4	77 1	13.3	45.3	0	
Actuated g/C Ratio	0.78	0.78	0.50	0.67	0.12	0.39		
v/c Ratio	0.65	0.19	0.00	0.46	0.56	0.32		
Control Delay	14.9	3.8	21.6	22	53.5	19.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	14.9	3.8	21.6	22	53.5	19.1		
LOS	B	A A	C	 A	D	B		
Approach Delay	2	8.9	13 7	71	36.9	2		
Approach LOS		0.0 A	B		D			
Queue Length 50th (m)	22.0	11.0	59 1	0.0	23.0	23.3		
Queue Length 95th (m)	m56.0	m19.5	91.2	12.7	33.9	33.8		
Internal Link Dist (m)		371.2	389.8		30.4			
Turn Bay Length (m)	60.0	••••=		175.0	••••			
Base Capacity (vph)	637	2571	1655	1171	372	617		
Starvation Cap Reductn	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0		
Reduced v/c Ratio	0.64	0.19	0.47	0.46	0.56	0.31		
Interception Summery	0.07	0.10	V.11	0.10	0.00	0.01		
	Other							
Area Type:	Other							
Cycle Length: 115	F							
Actuated Cycle Length: 11	5			T 01				
Offset: 43 (37%), Reference	ced to phase	EZEBIL		si, Start d	of Green			
Natural Cycle: 110	· · · P · · · · · ·							
Control Type: Actuated-Co	orginated							
Iviaximum V/c Ratio: 0.65	45.0							
Intersection Signal Delay:	15.6			Ir	ntersectio	n LOS: B	<b>D</b>	
Intersection Capacity Utiliz	ation 63.0%			](	JU Level	of Service	B	
Analysis Period (min) 15								

2024 Background Conditions 8: Smyth Road & General Hospital Access Rd m Volume for 95th percentile queue is metered by upstream signal.

#### Splits and Phases: 8: Smyth Road & General Hospital Access Rd



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	5	•	•	1	3	1
Traffic Volume (vph)	169	74	106	149	74	82
Future Volume (vph)	169	74	106	149	74	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			40.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1658	1745	1745	1483	1658	1483
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1658	1745	1745	1483	1658	1483
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.8	93.1		57.0	
Travel Time (s)		4.7	6.7		4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	188	82	118	166	82	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	188	82	118	166	82	91
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	ation 27.5%			IC	U Level	of Service A
Analysis Period (min) 15						
	-	$\mathbf{r}$	1	-	▲	1
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4Î			स	Y	
Traffic Volume (vph)	56	42	85	195	122	53
Future Volume (vph)	56	42	85	195	122	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)		0.0	0.0		0.0	0.0
Storage Lanes		0	0		1	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.942				0.959	
Flt Protected				0.985	0.966	
Satd. Flow (prot)	1644	0	0	1719	1617	0
Flt Permitted				0.985	0.966	
Satd. Flow (perm)	1644	0	0	1719	1617	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	396.5			285.4	325.9	
Travel Time (s)	28.5			20.5	23.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	62	47	94	217	136	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	0	311	195	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Canacity Litiliza	tion 30 7%			IC		of Service A
Analysis Period (min) 15	00.170			IC.		

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Volume (vph)	2	0	17	37	0	5	7	205	7	3	590	1
Future Volume (vph)	2	0	17	37	0	5	7	205	7	3	590	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.878			0.983			0.996				
Flt Protected		0.995			0.958			0.998				
Satd. Flow (prot)	0	1525	0	0	1643	0	0	1735	0	0	1745	0
Flt Permitted		0.995			0.958			0.998				
Satd. Flow (perm)	0	1525	0	0	1643	0	0	1735	0	0	1745	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		82.9			57.3			178.5			325.9	
Travel Time (s)		6.0			4.1			12.9			23.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		• • •			• • •			• • •			• • •	
Mid-Block Traffic (%)	•	0%	40		0%	•	•	0%	•	•	0%	
Adj. Flow (vph)	2	0	19	41	0	6	8	228	8	3	656	1
Shared Lane Traffic (%)	•	0.4	•	•	47	•	•	0.1.1	•	•		•
Lane Group Flow (vph)	0	21	0	0	47	0	0	244	0	0	660	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Leπ Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (K/n)	24	Oters	14	24	Oten	14	24	Otem	14	24	Oters	14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized						( <b>0</b> ·						
Intersection Capacity Utilizati	on 50.0%			IC	U Level	of Service	A					
Analysis Period (min) 15												

	-	•	T.	1	•	Ŧ	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		1⇒			र्स	
Traffic Volume (vph)	127	120	114	80	62	669	
Future Volume (vph)	127	120	114	80	62	669	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0%		0%			0%	
Storage Length (m)	0.0	0.0		0.0	0.0		
Storage Lanes	1	0		0	0		
Taper Length (m)	7.6				7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt	0.934		0.944				
Flt Protected	0.975					0.996	
Satd. Flow (prot)	1589	0	1647	0	0	1738	
Flt Permitted	0.975					0.996	
Satd. Flow (perm)	1589	0	1647	0	0	1738	
Link Speed (k/h)	50		50			50	
Link Distance (m)	109.2		52.2			178.5	
Travel Time (s)	7.9		3.8			12.9	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	141	133	127	89	69	743	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	274	0	216	0	0	812	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.5		0.0	Ŭ		0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.9		4.9			4.9	
Two way Left Turn Lane							
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	24	14		14	24		
Sign Control	Stop		Free			Free	
Intersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utiliza	tion 77.5%			IC	CU Level	of Service I	D
Analysis Period (min) 15							

Lane GroupEBLEBTEBRWBLWBTWBRNBLNBTNBRSBLSBTSiLane Configurations(1) <th>SBR 366 366</th>	SBR 366 366
Lane Configurations         Image: Applied Configuration         Image: A	366 366
Traffic Volume (vph)         118         531         4         4         896         11         5         0         4         127         1         3	366 366
	366
Euture Volume (vph) 118 531 4 4 896 11 5 0 4 127 1 3	
Ideal Flow (vphpl) 1800 1800 1800 1800 1800 1800 1800 180	1800
Lane Width (m) 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	3.5
Grade (%) 0% 0% 0%	
Storage Length (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0
Storage Lanes 0 0 0 0 0 0 1	0
Taper Length (m) 7.6 7.6 7.6 7.6 7.6	
Lane Util, Factor 0.95 0.95 0.95 0.95 0.95 0.95 1.00 1.00 1.00 1.00 1.00 1	1.00
Ped Bike Factor	
Frt 0.999 0.998 0.946 0.850	
Elt Protected 0.991 0.971 0.950	
Satd Flow (prot) 0 3283 0 0 3309 0 0 1603 0 1658 1483	0
Elt Permitted 0.598 0.953 0.481 0.751	Ū
Satd Flow (nerm) 0 1981 0 0 3154 0 0 794 0 1311 1483	0
Right Turn on Red Yes Yes Yes Y	Yes
Satd Flow (RTOR) 1 1 77 234	100
Link Speed (k/b) 50 50 50 50	
Link Distance (m) 446 7 395 2 147 1 52 2	
Travel Time (s) 32.2 28.5 10.6 3.8	
Confl Peds (#/hr)	
Confl Rikes (#/hr)	
Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	0 90
Growth Eactor 100% 100% 100% 100% 100% 100% 100% 100	100%
Heavy Vehicles (%) 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2%	2%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0
	Ŭ
Mid-Block Traffic (%) 0% 0% 0%	
Adi Flow (vph) 131 590 4 4 996 12 6 0 4 141 1 4	407
Shared Lane Traffic (%)	407
Lane Group Flow (vpb) $0.725$ $0.01012$ $0.01012$ $0.010$	0
Enter Blocked Intersection No	No
Lane Alignment Left Left Right Left Right Left Right Left Right Left Right Left Right	Right
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	i digin
$\operatorname{Link} \operatorname{Offset}(m) \qquad \qquad 0.0 \qquad \qquad $	
Crosswalk Width(m) 49 49 49	
Two way Left Turn Lane	
Headway East or 1.09 1.09 1.09 1.09 1.09 1.09 1.09 1.09	1 09
Turning Sneed $(k/h)$ 24 14 24 14 24 14 24 14 24	1.00
Number of Detectors $1 2 1 2 1 2 1 2 1 2$	
Detector Template Left Thru Left Thru Left Thru Left Thru	
Leading Detector (m) 61 30.5 61 30.5 61 30.5 61 30.5	
Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	
Turn Type $N\Delta$ Perm $N\Delta$ Perm $N\Delta$ Perm $N\Delta$ Perm $N\Delta$	
Protected Phases 5.2 6. 1	
Permitted Phases 2 6 4 0	
Officer (10303)         Z         U         4         0           Datector Phase         5         2         6         6         1         1         9         9	
Switch Phase	

2024 Background Conditions 4: Smyth Road & Ring Rd (N-S)

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.5	31.5		31.5	31.5	
Total Split (s)	16.0	78.0		62.0	62.0		37.0	37.0		37.0	37.0	
Total Split (%)	13.9%	67.8%		53.9%	53.9%		32.2%	32.2%		32.2%	32.2%	
Maximum Green (s)	10.6	72.3		56.3	56.3		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		82.4			82.4			21.4		21.4	21.4	
Actuated g/C Ratio		0.72			0.72			0.19		0.19	0.19	
v/c Ratio		0.51			0.45			0.05		0.58	0.88	
Control Delay		10.2			8.4			0.4		50.3	38.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		10.2			8.4			0.4		50.3	38.0	
LOS		В			А			А		D	D	
Approach Delay		10.2			8.4			0.4			41.2	
Approach LOS		В			А			А			D	
Queue Length 50th (m)		34.7			25.3			0.0		29.0	39.9	
Queue Length 95th (m)		64.0			95.0			0.0		44.5	72.4	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1418			2259			273		359	576	
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			0.45			0.04		0.39	0.71	
Intersection Summary	0"											
Area Type:	Other											
Cycle Length: 115	<b>-</b>											
Actuated Cycle Length: 11	5											
Unset: 35 (30%), Reference	ed to phase	ESIL		STL, Start	of Green							
Natural Cycle: 75	a ualiza a fa al											
Control Type: Actuated-Co	ordinated											
Intersection Circal Data	10.0				- <b>1</b>							
Intersection Signal Delay:	10.0 otion 00.00/			lr		n LOS: B	- <b>-</b>					
Analysis Period (min) 15	alion 83.9%				JU Level	UI SEIVICE	÷E					

2024 Background Conditions 4: Smyth Road & Ring Rd (N-S)



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्स	f,		¥	
Traffic Volume (vph)	8	97	240	12	7	2
Future Volume (vph)	8	97	240	12	7	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.994		0.973	
Flt Protected		0.996			0.962	
Satd. Flow (prot)	0	1738	1735	0	1633	0
Flt Permitted		0.996			0.962	
Satd. Flow (perm)	0	1738	1735	0	1633	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		109.2	130.9		57.7	
Travel Time (s)		7.9	9.4		4.2	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	9	108	267	13	8	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	117	280	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane	4.00	4.00				4.00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	_	_	14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: (	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 24.1%			IC	CU Level	ot Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		र्स	4Î		Y	
Traffic Volume (vph)	5	124	161	3	9	3
Future Volume (vph)	5	124	161	3	9	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.000		0.000	
Fit		0.000	0.998		0.969	
Fit Protected	•	0.998	4740	•	0.963	•
Satd. Flow (prot)	0	1/42	1742	0	1628	0
Fit Permitted	•	0.998	4740	•	0.963	•
Said. Flow (perm)	U	1/42	1/42	U	1628	U
Link Speed (K/h)		120.0	50		50	
		130.9	04.8		100.0	
Traver Time (S)		9.4	4.7		1.1	
Confl. Peus. (#/III)						
Peak Hour Factor	0 00	0 00	0 00	0 00	0 00	0 00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Rus Blockages (#/hr)	2 /0	2 /0	270	2 /0	2 /0	0
Parking (#/hr)	U	U	U	U	U	U
Mid-Block Traffic (%)		0%	0%		0%	
Adi Flow (vph)	6	138	179	3	10	3
Shared Lane Traffic (%)		100	110	Ū	10	U
Lane Group Flow (vph)	0	144	182	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)	Lon	0.0	0.0	, agint	3.5	i ugin
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: 0	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 21.2%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			\$			4	
Traffic Volume (vph)	20	10	179	459	28	36	101	155	123	21	155	26
Future Volume (vph)	20	10	179	459	28	36	101	155	123	21	155	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.884			0.991			0.956			0.983	
Flt Protected		0.995			0.958			0.987			0.995	
Satd. Flow (prot)	0	1535	0	0	1657	0	0	1647	0	0	1707	0
Flt Permitted		0.995			0.958			0.987			0.995	
Satd. Flow (perm)	0	1535	0	0	1657	0	0	1647	0	0	1707	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		93.1			97.8			54.4			67.4	
Travel Time (s)		6.7			7.0			3.9			4.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	22	11	199	510	31	40	112	172	137	23	172	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	232	0	0	581	0	0	421	0	0	224	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizati	ion 91.4%			IC	CU Level	of Service	F					
Analysis Period (min) 15												

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Lane Configurations	*	**	**	1	**	1		
Traffic Volume (voh)	130	816	560	204	424	369		
Future Volume (vph)	130	816	560	204	424	369		
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800		
Lane Width (m)	3.5	3 5	3.5	3 5	3 5	3.5		
Grade (%)	0.0	0%	0%	0.0	0%	0.0		
Storage Length (m)	60.0	070	070	175 0	0.0	0.0		
Storage Length (III)	1			175.0	0.0	0.0		
Taper Length (m)	30.0			I	76	1		
Lane Litil Factor	1 00	0.95	0.95	1 00	0.07	1 00		
Ped Bike Factor	1.00	0.35	0.35	1.00	0.37	1.00		
				0 850		0.850		
Flt Protected	0.050			0.000	0 050	0.000		
Satd Flow (prot)	1658	3216	3316	1/122	3216	1/122		
Elt Permitted	0 331	5510	5510	1403	0 050	1405		
Satd Flow (perm)	0.334 592	2216	3216	1/92	3016	1/92		
Dight Turn on Pod	000	3310	3310	1403 Voc	5210	140J		
Sata Elow (DTOD)				165		165		
Jalu. Flow (RTOR)		50	50	221	50	01		
Link Speed (K/II)		205.2	UC		UC EAA			
Link Distance (iii)		090.Z	413.0		2.0			
Confl Dodo (#/br)		20.3	29.0		3.9			
Confl. Peus. (#/nr)								
Conii. Bikes (#/1ii)	0.00	0.00	0.00	0.00	0.00	0.00		
Crowth Easter	100%	10.90	100%	100%	100%	1000/		
	100%	100%	100%	100%	100%	100%		
Heavy Venicies (%)	Ζ%	Z%	2%	Z%	2%	2%		
Bus Blockages (#/nr)	0	0	0	0	0	0		
Parking (#/nr)		00/	00/		00/			
	4 4 4	0%	0%	007	0%	440		
Auj. Flow (Vpl)	144	907	022	221	4/1	410		
Shared Lane Traffic (%)		007		007	474	140		
Lane Group Flow (vph)	144	907	622	227	4/1	410		
Enter Blocked Intersection	NO	NO	NO	NO	NO	NO		
Lane Alignment	Lett	Lett	Left	Right	Left	Right		
iviedian vvidtn(m)		3.5	3.5		7.0			
		0.0	0.0		0.0			
Crosswalk width(m)		4.9	4.9		4.9			
Two way Left Turn Lane	4.00	4.00	4.00	4.00	4.00	4.00		
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09		
Turning Speed (k/h)	24	^	_	14	24	14		
Number of Detectors	1	2	2	1	1	1		
Detector Template	Left	I hru	Ihru	Right	Left	Right		
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1		
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0		
Turn Type	pm+pt	NA	NA	pm+ov	custom	pm+ov		
Protected Phases	5	2	6	4	4	5	3	
Permitted Phases	2			6	3	43		
Detector Phase	5	2	6	4	4	5		
Switch Phase								

2024 Background Conditions 8: Smyth Road & General Hospital Access Rd Synchro 11 Report Page 10

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.9	24.4	41.4	11.1	11.1	10.9	29.3	
Total Split (s)	12.0	55.0	43.0	28.0	28.0	12.0	32.0	
Total Split (%)	10.4%	47.8%	37.4%	24.3%	24.3%	10.4%	28%	
Maximum Green (s)	6.1	48.6	36.6	21.9	21.9	6.1	25.7	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.9	6.4	6.4	6.1	6.1	5.9		
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	Min	C-Max	C-Max	None	None	Min	None	
Walk Time (s)			7.0				7.0	
Flash Dont Walk (s)			28.0				16.0	
Pedestrian Calls (#/hr)			10				10	
Act Effct Green (s)	78.5	78.0	62.0	85.9	24.5	40.7		
Actuated g/C Ratio	0.68	0.68	0.54	0.75	0.21	0.35		
v/c Ratio	0.29	0.40	0.35	0.20	0.69	0.71		
Control Delay	8.0	8.1	17.8	1.4	46.2	31.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	8.0	8.1	17.8	1.4	46.2	31.2		
LOS	А	А	В	А	D	С		
Approach Delay		8.1	13.4		39.2			
Approach LOS		А	В		D			
Queue Length 50th (m)	7.1	36.3	37.5	0.0	52.2	66.8		
Queue Length 95th (m)	20.9	56.3	73.4	6.8	56.5	72.2		
Internal Link Dist (m)		371.2	389.8		30.4			
Turn Bay Length (m)	60.0			175.0				
Base Capacity (vph)	491	2247	1787	1207	795	577		
Starvation Cap Reductn	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0		
Reduced v/c Ratio	0.29	0.40	0.35	0.19	0.59	0.71		
Intersection Summary								
Area Type:	Other							
Cycle Length: 115								
Actuated Cycle Length: 1	15							
Offset: 59 (51%), Referen	ced to phase	2:EBTL	and 6:WE	3T, Start o	of Green			
Natural Cycle: 95								
Control Type: Actuated-C	oordinated							
Maximum v/c Ratio: 0.71	10.0							
Intersection Signal Delay:	19.6			Ir	ntersectio	n LOS: B		
Intersection Capacity Utili	zation 52.0%	1		(	CU Level	of Service	A	
Analysis Period (min) 15								

2024 Background Conditions 8: Smyth Road & General Hospital Access Rd Splits and Phases: 8: Smyth Road & General Hospital Access Rd



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	3	•	•	1	500	1
Traffic Volume (vph)	54	117	125	47	94	105
Future Volume (vph)	54	117	125	47	94	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			40.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1658	1745	1745	1483	1658	1483
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1658	1745	1745	1483	1658	1483
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.8	93.1		57.0	
Travel Time (s)		4.7	6.7		4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	60	130	139	52	104	117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	130	139	52	104	117
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	97	_	_	97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	tion 25.8%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4			र्स	Y	
Traffic Volume (vph)	241	179	34	72	69	87
Future Volume (vph)	241	179	34	72	69	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)		0.0	0.0		0.0	0.0
Storage Lanes		0	0		1	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.942				0.925	
Flt Protected				0.984	0.978	
Satd. Flow (prot)	1644	0	0	1717	1579	0
Flt Permitted				0.984	0.978	
Satd. Flow (perm)	1644	0	0	1717	1579	0
Link Speed (k/h)	50	-	-	50	50	-
Link Distance (m)	396.5			285.4	325.9	
Travel Time (s)	28.5			20.5	23.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0,90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	U	U	v	Ū	v	U
Mid-Block Traffic (%)	0%			0%	0%	
Adi Flow (vph)	268	199	38	80	77	97
Shared Lane Traffic (%)	200	100	00	00		51
Lane Group Flow (vnh)	467	0	0	118	174	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alianment	Loft	Right	l off	l off	L off	Right
Median Width(m)	0.0	right	Leit	0.0	25	Tight
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1 0			1 0	1 0	
	4.3			4.3	4.3	
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1.00
Turning Speed (k/h)	1.09	1.09	1.09	1.09	1.09	1.09
Furthing Speed (K/II)	Cton	14	24	Cton	Cłan	14
	Stop			Stop	Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utiliza	tion 50.6%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			4			\$	
Traffic Volume (vph)	2	0	19	32	0	10	21	566	30	8	152	4
Future Volume (vph)	2	0	19	32	0	10	21	566	30	8	152	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.877			0.968			0.993			0.997	
Fit Protected	•	0.996	•	•	0.963	•	•	0.998	•	•	0.998	•
Satd. Flow (prot)	0	1524	0	0	1627	0	0	1/29	0	0	1/36	0
Fit Permitted	0	0.996	•	0	0.963	0	•	0.998	•	0	0.998	0
Sata. Flow (perm)	U	1524	0	U	1627	U	0	1729	0	U	1/30	0
Link Speed (K/n)		00			50			170 E			205.0	
Link Distance (m)		0Z.9			07.3 / 1			1/0.0			323.9 22 5	
Confl Pode (#/br)		0.0			4.1			12.9			23.5	
Confl. Plus. (#/III)												
Peak Hour Factor	0 00	0 90	0 00	0 00	0 00	0 90	0 00	0 00	0 90	0 00	0 00	0 00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	•	Ţ	Ū	•	•	•	•	Ū	Ţ	•	•	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	21	36	0	11	23	629	33	9	169	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	47	0	0	685	0	0	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: 0	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizat	ion 56.7%			IC	CU Level	of Service	B					
Analysis Period (min) 15												

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		ţ,			स्	
Traffic Volume (vph)	95	69	617	203	112	165	
Future Volume (vph)	95	69	617	203	112	165	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0%		0%			0%	
Storage Length (m)	0.0	0.0		0.0	0.0		
Storage Lanes	1	0		0	0		
Taper Length (m)	7.6				7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt	0.943		0.967				
Flt Protected	0.972					0.980	
Satd. Flow (prot)	1600	0	1688	0	0	1710	
Flt Permitted	0.972					0.980	
Satd. Flow (perm)	1600	0	1688	0	0	1710	
Link Speed (k/h)	50		50			50	
Link Distance (m)	109.2		52.2			178.5	
Travel Time (s)	7.9		3.8			12.9	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	106	77	686	226	124	183	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	183	0	912	0	0	307	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(m)	3.5	_	0.0	-		0.0	
Link Offset(m)	0.0		0.0			0.0	
Crosswalk Width(m)	4.9		4.9			4.9	
Two way Left Turn Lane							
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	24	14		14	24		
Sign Control	Stop		Free			Free	
Intersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utiliza	tion 83.0%			IC	CU Level	of Service I	Е
Analysis Period (min) 15							

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT	SBR
Lane Configurations	156
	156
Traffic Volume (vph) 435 778 2 1 567 103 6 0 0 28 0	100
Future Volume (vph) 435 778 2 1 567 103 6 0 0 28 0	156
Ideal Flow (vphpl) 1800 1800 1800 1800 1800 1800 1800 180	1800
Lane Width (m) 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	3.5
Grade (%) 0% 0% 0%	0.0
Storage Length (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0
Storage Lanes 0 0 0 0 0 0 1	0
Taper Length (m) 7.6 7.6 7.6 7.6 7.6	•
Lane Util Factor 0.95 0.95 0.95 0.95 0.95 0.95 1.00 1.00 1.00 1.00	1.00
Ped Bike Factor	
Ert 0.977 0.850	
Elt Protected 0.982 0.950 0.950	
Satd Flow (prot) 0 3256 0 0 3239 0 0 1658 0 1658 1483	0
Elt Permitted 0.589 0.954 0.371 0.753	v
Satd Flow (nerm) 0 1953 0 0 3090 0 0 647 0 1314 1483	0
Right Turn on Red Yes Yes Yes Yes	Yes
Sate Flow (RTOR) 19 586	100
Link Speed (k/b) 50 50 50 50	
Link Distance (m) 446 7 395 2 147 1 52 2	
Travel Time (s) 32.2 28.5 10.6 3.8	
Confl Peds (#/hr)	
Confl Bikes (#/hr)	
Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	0 90
Growth Eactor 100% 100% 100% 100% 100% 100% 100% 100	100%
Heavy Vehicles (%) 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2% 2%	2%
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2,0
	Ŭ
Mid-Block Traffic (%) 0% 0% 0%	
Adi Elow (vph) 483 864 2 1 630 114 7 0 0 31 0	173
Shared Lane Traffic (%)	110
Lane Group Flow (vph) $0.1349$ $0.0745$ $0.07$ $0.731$ $173$	0
Enter Blocked Intersection No	No
Lane Alignment Left Left Right Left Right Left Right Left Right Left Right Left Left Right Left Left Left Left Left Left Left Lef	Right
Median Width(m) 35 35 35 35	rugin
$\operatorname{Link} \operatorname{Offset}(m) \qquad \qquad 0.0 \qquad \qquad $	
Crosswalk Width(m) 49 49 49 49	
Two way Left Turn Lane	
Headway East run Lance 1.09 1.09 1.09 1.09 1.09 1.09 1.09 1.09	1 09
Turning Speed $(k/h)$ 24 14 24 14 24 14 24 14 24	14
Number of Detectors $1 2 1 2 1 2 1 2 1 2$	17
Detector Template Left Thru Left Thru Left Thru Left Thru	
Leading Detector (m) 61 30.5 61 30.5 61 30.5 61 30.5	
Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	
Turn Type $nm+nt$ NA Perm NA Perm NA Derm NA Derm NA	
Protected Phases 5.2 6 1	
Permitted Phases 2 6 4 9	
Datector Phase 5 2 6 6 / / / 9 9	
Switch Phase	

	٦	<b>→</b>	$\mathbf{\hat{z}}$	4	+	*	1	1	1	1	Ļ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.0	31.0		31.0	31.0	
Total Split (s)	42.0	84.0		42.0	42.0		31.0	31.0		31.0	31.0	
Total Split (%)	36.5%	73.0%		36.5%	36.5%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	36.6	78.3		36.3	36.3		25.5	25.5		25.5	25.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		91.2			91.2			12.6		12.6	12.6	
Actuated g/C Ratio		0.79			0.79			0.11		0.11	0.11	
v/c Ratio		0.96dl			0.30			0.10		0.22	0.25	
Control Delay		17.3			7.7			45.8		48.2	0.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		17.3			7.7			45.8		48.2	0.9	
LOS		В			А			D		D	А	
Approach Delay		17.3			7.7			45.8			8.1	
Approach LOS		В			А			D			А	
Queue Length 50th (m)		73.9			12.7			1.5		6.7	0.0	
Queue Length 95th (m)		#205.3			81.2			5.3		14.2	0.0	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1548			2454			143		291	784	
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		0.87			0.30			0.05		0.11	0.22	
Intersection Summary												
Area Type:	Other											
Cycle Length: 115	_											
Actuated Cycle Length: 11	5		1.0.14/5									
Offset: 35 (30%), Referenc	ed to phase	2:EBIL	and 6:WE	BIL, Start	of Green							
Natural Cycle: 120												
Control Type: Actuated-Co	ordinated											
Maximum v/c Ratio: 0.87	10.4											
Intersection Signal Delay: 1	13.4			Ir	ntersectio	n LOS: B						
Intersection Capacity Utiliza	ation 80.4%			](	JU Level	of Service	ЭD					
Analysis Period (min) 15												

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

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

#### Splits and Phases: 4: Smyth Road & Ring Rd (N-S)



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		च	1⇒		¥	
Traffic Volume (vph)	11	226	161	24	11	1
Future Volume (vph)	11	226	161	24	11	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.982		0.990	
Flt Protected	_	0.998		•	0.956	•
Satd. Flow (prot)	0	1/42	1/14	0	1652	0
Fit Permitted	•	0.998	4744	•	0.956	•
Satd. Flow (perm)	0	1742	1/14	0	1652	0
Link Speed (K/n)		50	120.0		50	
Link Distance (m)		7.0	130.9		5/./ 1 0	
Confl Dode (#/br)		7.9	9.4		4.Z	
Confl. Rikes (#/hr)						
Peak Hour Factor	0 90	0 90	0 90	0 90	0 90	0 90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	Ŭ	Ű	Ŭ	Ŭ	Ű	Ŭ
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	12	251	179	27	12	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	263	206	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0	-	3.5	_
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: C	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 32.0%			IC	CU Level of	of Service A
Analysis Period (min) 15						

	٦	-	-	•	1	∢
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		સી	1.		¥	
Traffic Volume (vph)	26	261	121	10	4	4
Future Volume (vph)	26	261	121	10	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.990		0.932	
Fit Protected	_	0.995		-	0.976	-
Satd. Flow (prot)	0	1736	1728	0	1587	0
Flt Permitted	-	0.995		_	0.976	
Satd. Flow (perm)	0	1736	1728	0	1587	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		130.9	64.8		106.6	
Travel Lime (s)		9.4	4.7		7.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
	100%	100%	100%	100%	100%	100%
Heavy venicies (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/nr)	U	U	U	U	U	U
Parking (#/nr)		00/	00/		00/	
IVIIU-BIOCK ITATTIC (%)	00	0%	U%	11	0%	1
Auj. Flow (vpri)	29	290	134	11	4	4
	0	210	115	0	0	0
Enter Blocked Intersection	U	319	145	U	0 No	U No
Lano Alignment			INU Loff	NU Diaht	INU Loft	Diabt
Lane Alignment Modion Width(m)	Leit	Leit	Leit	Right	2 E	Right
link Offect(m)		0.0	0.0		0.0	
Crocowelk Width(m)		0.0	0.0		0.0	
		4.9	4.9		4.9	
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00
Turning Speed (k/h)	2/	1.03	1.03	1.03	2/	1.03
Sign Control	24	Free	Froo	14	Stop	14
		1100	1100		otop	
Intersection Summary	Othor					
Area Type: (	Jiner					
Interportion Conscient Littlenet	ion 26 70/			10		of Convice A
Analysis Deried (min) 45	1011 30.7%			IC	JU Level (	UI SEIVICE A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Traffic Volume (vph)	16	35	114	173	23	7	230	157	516	21	141	10
Future Volume (vph)	16	35	114	173	23	7	230	157	516	21	141	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.007			0.005							
Frt		0.907			0.995			0.923			0.992	
Fit Protected	•	0.995	•	•	0.959	•	•	0.987	•	•	0.994	•
Satd. Flow (prot)	0	15/5	0	0	1665	0	0	1590	0	0	1/21	0
Fit Permitted	0	0.995	0	0	0.959	•	•	0.987	0	0	0.994	0
Satd. Flow (perm)	0	1575	0	0	1665	0	0	1590	0	0	1721	0
Link Speed (k/n)		50			50			50			50	
LINK Distance (m)		93.1			97.8			54.4			67.4	
Travel Time (s)		6.7			7.0			3.9			4.9	
Confl. Peas. (#/hr)												
Confi. Bikes (#/nr)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	100%	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	100%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Rue Pleekegee (#/hr)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Dus Diockayes (#/III) Darking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid Block Traffic (%)		0%			0%			0%			0%	
Adi Elow (vph)	18	30	107	102	26	8	256	17/	573	23	157	11
Shared Lane Traffic (%)	10	33	121	IJZ	20	0	200	1/4	575	20	157	11
Lane Group Flow (uph)	٥	18/	٥	٥	226	٥	٥	1003	٥	٥	101	٥
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Liner Diocked Intersection	Loft	Loft	Right	Loft	Loft	Right	Loft	Loft	Right		Loft	Right
Median Width(m)	Leit	0.0	Tight	Leit	0.0	Tight	Len	0.0	Tagin	Len	0.0	Ttight
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		0.0 4 9			0.0 4 9			0.0 4 9			0.0 4 9	
		7.5			7.5			7.0			7.0	
Headway Eactor	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09	1 09
Turning Speed (k/h)	24	1.00	14	24	1.00	14	24	1.00	14	24	1.00	14
Sign Control	21	Stop		21	Stop		21	Stop		21	Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizati	on 100.7%	6		IC	CU Level	of Service	G					
Analysis Period (min) 15												

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations	*	**	**	1	**	#	
Traffic Volume (vph)	368	437	701	516	205	174	
Future Volume (vph)	368	/37	701	516	205	174	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lana Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
	5.5	00/	0.0	5.5	0.0	5.5	
Storage Length (m)	60.0	0 /0	0 /0	175.0	0 /0	0.0	
Storage Length (III)	00.0			175.0	0.0	0.0	
Storage Laries	20.0			I	7.6	1	
Taper Length (m)	30.0	0.05	0.05	4 00	0.7	1 00	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00	
Ped Bike Factor				0.050		0.050	
Frt				0.850	0.050	0.850	
Fit Protected	0.950	0010	0010		0.950	1.100	
Satd. Flow (prot)	1658	3316	3316	1483	3216	1483	
FIt Permitted	0.261				0.950		
Satd. Flow (perm)	455	3316	3316	1483	3216	1483	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				573		37	
Link Speed (k/h)		50	50		50		
Link Distance (m)		395.2	413.8		54.4		
Travel Time (s)		28.5	29.8		3.9		
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adi, Flow (vph)	409	486	779	573	228	193	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	409	486	779	573	228	193	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)	2010	3.5	3.5		7 0		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		4 9	49		49		
Two way Left Turn Lane		т. <b>у</b>	т.5		- <b>.</b> ,		
Headway Factor	1 00	1 00	1 00	1 00	1 00	1 09	
Turning Speed (k/h)	- 24	1.00	1.00	1.03	24	14	
Number of Detectors		2	2	14	24	14	
Detector Template	L off	2 Thru	Z	Picht	l off	Pight	
Leading Detector (m)	Eent G 1	20 5	20 5	Right 6 1	Leil 6 1	Right 6 1	
Trailing Detector (III)	0.1	0.0	30.5	0.1	0.1	0.1	
	0.0		0.0	0.0	U.U	0.0	
Turil Type	pm+pt	NA 0	INA C	pin+ov	CUSION	pm+0v	3
Protected Phases	5	2	б	4	4	5	3
Permitted Phases	2	0	C C	0	3	43	
Delector Phase	5	2	6	4	4	5	
Switch Phase							

2024 Total Conditions8: Smyth Road & General Hospital Access Rd

Lane Group         EBL         EBT         WBT         WBR         SBL         SBR         03           Minimum Initial (s)         5.0         10.0         10.0         5.0         5.0         10.0           Minimum Split (s)         23.9         24.4         41.4         11.1         11.3         23.9         32.0           Total Split (s)         24.3%         60.9%         36.5%         11.3%         11.3%         24.3%         28%           Maximum Green (s)         2.1         63.6         35.6         6.9         6.9         22.1         28.0           Vellow Time (s)         2.6         3.1         3.1         2.8         2.6         1.0           Lead/Lag Dytimize?         Yes		≯	-	-	•	- <b>`</b>	-		
Minimum Initial (s)         5.0         10.0         10.0         5.0         5.0         5.0         10.0           Minimum Split (s)         23.9         24.4         41.4         11.1         11.1         23.9         32.0           Total Split (s)         28.0         70.0         42.0         13.0         28.0         32.0           Total Split (%)         24.3%         60.9%         36.5%         11.3%         11.3%         24.3%         28%           Maximum Green (s)         22.1         63.6         35.6         6.9         6.9         22.1         28.0           Yellow Time (s)         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.3         3.0         3.0           Lead/Lag         Lead         Lag         Lag         Lead         Lag         Lag<	Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Split (s)       23.9       24.4       41.4       11.1       11.1       23.9       32.0         Total Split (%)       28.0       70.0       42.0       13.0       13.0       28.0       32.0         Total Split (%)       24.3%       60.9%       36.5%       11.3%       11.3%       24.3%       28%         Maximum Green (s)       22.1       63.6       35.6       6.9       6.9       22.1       28.0         Vellow Time (s)       3.3       3.0       3	Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	10.0	
Total Split (s)       28.0       70.0       42.0       13.0       13.0       28.0       32.0         Total Split (%)       24.3%       60.9%       36.5%       11.3%       11.3%       24.3%       28%         Maximum Green (s)       22.1       63.6       35.6       6.9       6.9       22.1       28.0         Yellow Time (s)       3.3	Minimum Split (s)	23.9	24.4	41.4	11.1	11.1	23.9	32.0	
Total Split (%)       24.3%       60.9%       36.5%       11.3%       11.3%       24.3%       28%         Maximum Green (s)       22.1       63.6       35.6       6.9       6.9       22.1       28.0         Yellow Time (s)       3.3       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0       3.0	Total Split (s)	28.0	70.0	42.0	13.0	13.0	28.0	32.0	
Maximum Green (s)         22.1         63.6         35.6         6.9         6.9         22.1         28.0           Yellow Time (s)         3.3         3.0 <td< td=""><td>Total Split (%)</td><td>24.3%</td><td>60.9%</td><td>36.5%</td><td>11.3%</td><td>11.3%</td><td>24.3%</td><td>28%</td><td></td></td<>	Total Split (%)	24.3%	60.9%	36.5%	11.3%	11.3%	24.3%	28%	
Yellow Time (s)       3.3       3.0	Maximum Green (s)	22.1	63.6	35.6	6.9	6.9	22.1	28.0	
All-Red Time (s)       2.6       3.1       3.1       2.8       2.8       2.6       1.0         Lost Time Adjust (s)       0.0       0.0       0.0       0.0       0.0       0.0         Total Lost Time (s)       5.9       6.4       6.4       6.1       6.1       5.9         Lead/Lag Optimize?       Yes       <	Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	
Lost Time Adjust (s)         0.0         0.0         0.0         0.0         0.0           Total Lost Time (s)         5.9         6.4         6.4         6.1         6.1         5.9           Lead/Lag         Lag         Lag         Lag         Lag         Lead         Lead           Lead-Lag Optimize?         Yes         Yes         Yes         Yes         Yes         Yes           Vehicle Extension (s)         3.0 </td <td>All-Red Time (s)</td> <td>2.6</td> <td>3.1</td> <td>3.1</td> <td>2.8</td> <td>2.8</td> <td>2.6</td> <td>1.0</td> <td></td>	All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	1.0	
Total Lost Time (s)         5.9         6.4         6.4         6.1         6.1         5.9           Lead/Lag Optimize?         Yes         Yas <td< td=""><td>Lost Time Adjust (s)</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td></td><td></td></td<>	Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Lead/Lag         Lag         Lag         Lag         Lag         Lag         Lag         Lead         Lead           Lead-Lag Optimize?         Yes	Total Lost Time (s)	5.9	6.4	6.4	6.1	6.1	5.9		
Lead-Lag Optimize?         Yes         Yes <thyes< th=""></thyes<>	Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Vehicle Extension (s)       3.0       3.	Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Minimum Gap (s)         3.0	Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)       0.0       0	Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time To Reduce (s)         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           Recall Mode         None         C-Max         C-Max         None         None         None         None           Walk Time (s)         7.0         7.0         7.0         7.0         7.0           Flash Dont Walk (s)         28.0         21.0         Pedestrian Calls (#/hr)         0           Act Effct Green (s)         88.8         88.3         56.4         77.0         14.2         46.3           Actuated g/C Ratio         0.77         0.77         0.49         0.67         0.12         0.40           v/c Ratio         0.66         0.19         0.48         0.48         0.57         0.31           Control Delay         15.1         4.0         22.6         2.3         52.9         18.4           Queue Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach LOS         A         B         D         Queue Length 95th (m)         m52.4         m19.7         94.5         13.2	Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode         None         C-Max         C-Max         None         None         None         None           Walk Time (s)         7.0         7.0         7.0         7.0         7.0           Flash Dont Walk (s)         28.0         21.0         0         0         0           Pedestrian Calls (#/hr)         0         0         0         0         0           Act Lated g/C Ratio         0.77         0.70         14.2         46.3         Actuated g/C Ratio         0.77         0.49         0.67         0.12         0.40           v/c Ratio         0.66         0.19         0.48         0.48         0.57         0.31         Control Delay         15.1         4.0         22.6         2.3         52.9         18.4           Queue Delay         10.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B         A         D         A         D         Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0         Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3	Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Walk Time (s)         7.0         7.0           Flash Dont Walk (s)         28.0         21.0           Pedestrian Calls (#/hr)         0         0           Act Effct Green (s)         88.8         88.3         56.4         77.0         14.2         46.3           Actuated g/C Ratio         0.77         0.77         0.49         0.67         0.12         0.40           v/c Ratio         0.66         0.19         0.48         0.48         0.57         0.31         Control Delay         15.1         4.0         22.6         2.3         52.9         18.4           Queue Delay         0.0         0.0         0.0         0.0         0.0         0.0         0.0           Total Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach LOS         A         B         D         D         Queue Length 50th (m)         24.3         11.1         60.0         0.25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3         Intersetion Signal Casetasetasetasetasetase	Recall Mode	None	C-Max	C-Max	None	None	None	None	
Flash Dont Walk (s)       28.0       21.0         Pedestrian Calls (#/hr)       0       0         Act Effct Green (s)       88.8       88.3       56.4       77.0       14.2       46.3         Actuated g/C Ratio       0.77       0.77       0.49       0.67       0.12       0.40         v/c Ratio       0.66       0.19       0.48       0.48       0.57       0.31         Control Delay       15.1       4.0       22.6       2.3       52.9       18.4         Queue Delay       0.0       0.0       0.0       0.0       0.0       0.0         Total Delay       15.1       4.0       22.6       2.3       52.9       18.4         LOS       B       A       C       A       D       B         Approach Delay       9.0       14.0       37.0       Approach LOS       A       B       D         Queue Length 50th (m)       24.3       11.1       60.0       0.0       22.5       23.0       Queue Length 95th (m)       371.2       389.8       30.4         Turn Bay Length (m)       60.0       175.0       Base Capacity (vph)       632       2546       1625       1182       397       630	Walk Time (s)			7.0				7.0	
Pedestrian Calls (#/hr)         0         0           Act Effct Green (s)         88.8         88.3         56.4         77.0         14.2         46.3           Actuated g/C Ratio         0.77         0.77         0.49         0.67         0.12         0.40           v/c Ratio         0.66         0.19         0.48         0.48         0.57         0.31           Control Delay         15.1         4.0         22.6         2.3         52.9         18.4           Queue Delay         0.0         0.0         0.0         0.0         0.0         0.0           Total Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach Delay         9.0         14.0         37.0         Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4	Flash Dont Walk (s)			28.0				21.0	
Act Effct Green (s)       88.8       88.3       56.4       77.0       14.2       46.3         Actuated g/C Ratio       0.77       0.77       0.49       0.67       0.12       0.40         v/c Ratio       0.66       0.19       0.48       0.48       0.57       0.31         Control Delay       15.1       4.0       22.6       2.3       52.9       18.4         Queue Delay       0.0       0.0       0.0       0.0       0.0       0.0         Total Delay       15.1       4.0       22.6       2.3       52.9       18.4         LOS       B       A       C       A       D       B         Approach Delay       9.0       14.0       37.0       Approach LOS       A       B       D         Queue Length 50th (m)       24.3       11.1       60.0       0.0       25.2       23.0         Queue Length 95th (m)       m52.4       m19.7       94.5       13.2       35.9       32.3         Internal Link Dist (m)       371.2       389.8       30.4       30.4       11.1       50.0       0       0       0       0       0       0       0       0       0       52.8       1	Pedestrian Calls (#/hr)			0				0	
Actuated g/C Ratio       0.77       0.77       0.49       0.67       0.12       0.40         v/c Ratio       0.66       0.19       0.48       0.48       0.57       0.31         Control Delay       15.1       4.0       22.6       2.3       52.9       18.4         Queue Delay       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Total Delay       15.1       4.0       22.6       2.3       52.9       18.4         LOS       B       A       C       A       D       B         Approach Delay       9.0       14.0       37.0       Approach LOS       A       B       D       Queue Length 50th (m)       24.3       11.1       60.0       0.0       25.2       23.0         Queue Length 95th (m)       24.3       11.1       60.0       0.0       25.2       23.0         Queue Length 95th (m)       371.2       389.8       30.4       11       11.1       60.0       <	Act Effct Green (s)	88.8	88.3	56.4	77.0	14.2	46.3		
v/c Ratio       0.66       0.19       0.48       0.48       0.57       0.31         Control Delay       15.1       4.0       22.6       2.3       52.9       18.4         Queue Delay       0.0       0.0       0.0       0.0       0.0       0.0         Total Delay       15.1       4.0       22.6       2.3       52.9       18.4         LOS       B       A       C       A       D       B         Approach Delay       9.0       14.0       37.0         Approach LOS       A       B       D         Queue Length 50th (m)       24.3       11.1       60.0       0.0       25.2       23.0         Queue Length 95th (m)       m52.4       m19.7       94.5       13.2       35.9       32.3         Internal Link Dist (m)       371.2       389.8       30.4       30.4       100       0	Actuated g/C Ratio	0.77	0.77	0.49	0.67	0.12	0.40		
Control Delay         15.1         4.0         22.6         2.3         52.9         18.4           Queue Delay         0.0         0.0         0.0         0.0         0.0         0.0           Total Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach Delay         9.0         14.0         37.0         Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         Turn Bay Length (m)         60.0         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0         0           Reduced v/c Ra	v/c Ratio	0.66	0.19	0.48	0.48	0.57	0.31		
Queue Delay         0.0         0.0         0.0         0.0         0.0         0.0           Total Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach Delay         9.0         14.0         37.0         Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         TUR Bay Length (m)         60.0         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         0         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0         0         0           Reduced v/c Ratio         0.65         0.19         0.48         0.48         0.57         0.31	Control Delay	15.1	4.0	22.6	2.3	52.9	18.4		
Total Delay         15.1         4.0         22.6         2.3         52.9         18.4           LOS         B         A         C         A         D         B           Approach Delay         9.0         14.0         37.0         Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         30.4         1100         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         0         0         0         0         0           Staryation Cap Reductn         0         0         0         0         0         0           Staryation Cap Reductn         0         0         0         0         0         0           Staryation Cap Reductn         0         0         0         0         0         0           Reduced v/c Ratio         0	Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
LOS         B         A         C         A         D         B           Approach Delay         9.0         14.0         37.0         Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         30.4         30.4           Turn Bay Length (m)         60.0         175.0         32.3         30.4         30.4           Starvation Cap Reductn         0         0         0         0         0         0           Starvation Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0           Reduced v/c Ratio         0.65         0.19         0.48         0.48         0.57         0.31           Intersection Summary	Total Delay	15.1	4.0	22.6	2.3	52.9	18.4		
Approach Delay         9.0         14.0         37.0           Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         Turn Bay Length (m)         60.0         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0           Reduced v/c Ratio         0.65         0.19         0.48         0.48         0.57         0.31           Intersection Summary         Viewer Mark         Viewer Mark         Viewer Mark         Viewer Mark         Viewer Mark           Area Type:         Other         Other         Cycle Length: 115         Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green         Natural Cycle: 110         Control Type: Actuated-Coordinated         Maximum v/	LOS	В	А	С	А	D	В		
Approach LOS         A         B         D           Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         Turn Bay Length (m)         60.0         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         0         0         0         0         0           Spillback Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0           Reduced v/c Ratio         0.65         0.19         0.48         0.48         0.57         0.31           Intersection Summary         Intersection Summary         Intersection Summary         Intersection Summary         Intersection Capacity Color           Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green         Natural Cycle: 110         Control Type: Actuated-Coordinated         Intersection LOS: B         Intersection	Approach Delay		9.0	14.0		37.0			
Queue Length 50th (m)         24.3         11.1         60.0         0.0         25.2         23.0           Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4         30.4           Turn Bay Length (m)         60.0         175.0         1882         397         630           Starvation Cap Reductn         0         0         0         0         0         0           Starvation Cap Reductn         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0         0           Storage Cap Reductn         0         0         0         0         0         0         0           Reduced v/c Ratio         0.65         0.19         0.48         0.48         0.57         0.31           Intersection Summary         Intersection Summary         Intersection Summary         Intersection Capacity Utilization 65.2%         Intersection LOS: B         Intersection LOS: B           Intersection Capacity Utilization 65.2%         ICU Level of Service C         Analvsis Period (min) 15         ICU Level of Se	Approach LOS		А	В		D			
Queue Length 95th (m)         m52.4         m19.7         94.5         13.2         35.9         32.3           Internal Link Dist (m)         371.2         389.8         30.4 <td>Queue Length 50th (m)</td> <td>24.3</td> <td>11.1</td> <td>60.0</td> <td>0.0</td> <td>25.2</td> <td>23.0</td> <td></td> <td></td>	Queue Length 50th (m)	24.3	11.1	60.0	0.0	25.2	23.0		
Internal Link Dist (m)         371.2         389.8         30.4           Turn Bay Length (m)         60.0         175.0           Base Capacity (vph)         632         2546         1625         1182         397         630           Starvation Cap Reductn         0         10         10         15         15         15         16         16         15         16         16         16         1	Queue Length 95th (m)	m52.4	m19.7	94.5	13.2	35.9	32.3		
Turn Bay Length (m)       60.0       175.0         Base Capacity (vph)       632       2546       1625       1182       397       630         Starvation Cap Reductn       0       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0       0         Reduced v/c Ratio       0.65       0.19       0.48       0.48       0.57       0.31         Intersection Summary	Internal Link Dist (m)		371.2	389.8		30.4			
Base Capacity (vph)       632       2546       1625       1182       397       630         Starvation Cap Reductn       0       0       0       0       0       0         Spillback Cap Reductn       0       0       0       0       0       0         Storage Cap Reductn       0       0       0       0       0       0         Reduced v/c Ratio       0.65       0.19       0.48       0.48       0.57       0.31         Intersection Summary	Turn Bay Length (m)	60.0			175.0				
Starvation Cap Reductn         0         1         0         0         1	Base Capacity (vph)	632	2546	1625	1182	397	630		
Spillback Cap Reductn000000Storage Cap Reductn000000Reduced v/c Ratio0.650.190.480.480.570.31Intersection SummaryArea Type:OtherCycle Length: 1150000Actuated Cycle Length: 1150000Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of GreenNatural Cycle: 110000Control Type: Actuated-Coordinated000Maximum v/c Ratio: 0.66000Intersection Signal Delay: 16.0100Intersection Capacity Utilization 65.2%100Current Capacity Utilization 65.2%000Current Capac	Starvation Cap Reductn	0	0	0	0	0	0		
Storage Cap Reductn000000Reduced v/c Ratio0.650.190.480.480.570.31Intersection SummaryArea Type:OtherCycle Length: 1150Actuated Cycle Length: 1150Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of GreenNatural Cycle: 110Control Type: Actuated-CoordinatedMaximum v/c Ratio: 0.66Intersection Signal Delay: 16.0Intersection LOS: BIntersection Capacity Utilization 65.2%ICU Level of Service CAnalysis Period (min) 15	Spillback Cap Reductn	0	0	0	0	0	0		
Reduced v/c Ratio       0.65       0.19       0.48       0.48       0.57       0.31         Intersection Summary         Area Type:       Other         Cycle Length: 115       Other         Actuated Cycle Length: 115       Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green         Natural Cycle: 110       Control Type: Actuated-Coordinated         Maximum v/c Ratio: 0.66       Intersection LOS: B         Intersection Capacity Utilization 65.2%       ICU Level of Service C         Analysis Period (min) 15       Maximum V/c	Storage Cap Reductn	0	0	0	0	0	0		
Intersection Summary         Area Type:       Other         Cycle Length: 115       Other         Actuated Cycle Length: 115       Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green         Natural Cycle: 110       Control Type: Actuated-Coordinated         Maximum v/c Ratio: 0.66       Intersection LOS: B         Intersection Capacity Utilization 65.2%       ICU Level of Service C         Analysis Period (min) 15       Actuated for the section Log of the service C	Reduced v/c Ratio	0.65	0.19	0.48	0.48	0.57	0.31		
Area Type:       Other         Cycle Length: 115       Other         Actuated Cycle Length: 115       Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green         Natural Cycle: 110       Control Type: Actuated-Coordinated         Maximum v/c Ratio: 0.66       Intersection LOS: B         Intersection Capacity Utilization 65.2%       ICU Level of Service C         Analysis Period (min) 15       Actuated for the section LOS: B	Intersection Summarv								
Cycle Length: 115 Actuated Cycle Length: 115 Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green Natural Cycle: 110 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.66 Intersection Signal Delay: 16.0 Intersection LOS: B Intersection Capacity Utilization 65.2% ICU Level of Service C Analysis Period (min) 15	Area Type:	Other							
Actuated Cycle Length: 115 Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green Natural Cycle: 110 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.66 Intersection Signal Delay: 16.0 Intersection LOS: B Intersection Capacity Utilization 65.2% ICU Level of Service C Analysis Period (min) 15	Cycle Length: 115								
Offset: 43 (37%), Referenced to phase 2:EBTL and 6:WBT, Start of Green Natural Cycle: 110 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.66 Intersection Signal Delay: 16.0 Intersection LOS: B Intersection Capacity Utilization 65.2% ICU Level of Service C Analysis Period (min) 15	Actuated Cycle Length: 11	5							
Natural Cycle: 110         Control Type: Actuated-Coordinated         Maximum v/c Ratio: 0.66         Intersection Signal Delay: 16.0         Intersection Capacity Utilization 65.2%         ICU Level of Service C         Analysis Period (min) 15	Offset: 43 (37%) Reference	ed to phase	2.EBTI	and 6·WF	ST Start o	of Green			
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.66 Intersection Signal Delay: 16.0 Intersection Capacity Utilization 65.2% Analysis Period (min) 15	Natural Cycle: 110		, 2.2012		, otart (				
Maximum v/c Ratio: 0.66         Intersection Signal Delay: 16.0         Intersection Capacity Utilization 65.2%         ICU Level of Service C         Analysis Period (min) 15	Control Type: Actuated-Co	ordinated							
Intersection Signal Delay: 16.0 Intersection LOS: B Intersection Capacity Utilization 65.2% ICU Level of Service C Analysis Period (min) 15	Maximum v/c Ratio: 0.66								
Intersection Capacity Utilization 65.2% ICU Level of Service C Analysis Period (min) 15	Intersection Signal Delay:	16.0			Ir	ntersectio	n I OS' B		
Analysis Period (min) 15	Intersection Capacity Utiliz	ration 65.2%			10		of Service	C	
	Analysis Period (min) 15							-	

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

#### Splits and Phases: 8: Smyth Road & General Hospital Access Rd



	٦	-	+	*	1	<
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	3	•	•	1	5	1
Traffic Volume (vph)	208	74	106	183	92	92
Future Volume (vph)	208	74	106	183	92	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			40.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1658	1745	1745	1483	1658	1483
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1658	1745	1745	1483	1658	1483
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.8	93.1		57.0	
Travel Time (s)		4.7	6.7		4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	231	82	118	203	102	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	231	82	118	203	102	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization	ation 30.9%			IC	CU Level	of Service A
Analysis Period (min) 15						

	-	$\mathbf{r}$	1	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	¢î			र्स	Y		
Traffic Volume (vph)	56	51	85	195	128	53	
Future Volume (vph)	56	51	85	195	128	53	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0%			0%	0%		
Storage Length (m)		0.0	0.0		0.0	0.0	
Storage Lanes		0	0		1	0	
Taper Length (m)			7.6		7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt	0.935				0.960		
Flt Protected				0.985	0.966		
Satd. Flow (prot)	1632	0	0	1719	1618	0	
Flt Permitted				0.985	0.966		
Satd. Flow (perm)	1632	0	0	1719	1618	0	
Link Speed (k/h)	50			50	50		
Link Distance (m)	396.5			285.4	325.9		
Travel Time (s)	28.5			20.5	23.5		
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)				-		-	
Mid-Block Traffic (%)	0%			0%	0%		
Adi, Flow (vph)	62	57	94	217	142	59	
Shared Lane Traffic (%)		•••	•.				
Lane Group Flow (vph)	119	0	0	311	201	0	
Enter Blocked Intersection	No	No	No	No	No.	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(m)	0.0	ingin	Lon	0.0	3.5	, ugin	
Link Offset(m)	0.0			0.0	0.0		
Crosswalk Width(m)	0.0 ⊿ Q			0.0 ⊿ Q	0.0 ⊿ Q		
Two way Left Turn Lane	т.3			т.J	<del>т</del> .5		
Headway Eactor	1 00	1 00	1 00	1 00	1 00	1 00	
Turning Speed (k/h)	1.09	1.09	24	1.09	24	1/	
Sign Control	Ston	14	24	Stop	Stop	14	
	Stop			Stop	Stop		
Intersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utiliza	tion 40.0%			IC	CU Level	of Service A	A
Analysis Period (min) 15							

Lane Group         EBL         EBT         EBR         WBL         WBT         WBT         NBT         NBT         NBR         SEL         SBT         SBR           Lane Configurations         +		≯	-	$\mathbf{i}$	4	+	*	•	Ť	۲	1	Ŧ	~
Lane Configurations         4         4         4         4         4           Traffic Volume (vph)         2         0         17         37         0         5         7         211         7         3         699         1           Iduar Volume (vph)         2         0         17         37         0         5         7         211         7         3         599         1           Ideal Flow (vphp)         1800         100         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00         1.00	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)         2         0         17         37         0         5         7         211         7         3         S§9         1           Huture Volume (vph)         2         0         17         37         0         5         7         211         7         3         S§9         1           Gleal Flow (vphp)         1800 <td< td=""><td>Lane Configurations</td><td></td><td>4</td><td></td><td></td><td>4</td><td></td><td></td><td>4</td><td></td><td></td><td>4</td><td></td></td<>	Lane Configurations		4			4			4			4	
Future Volume (vph)         2         0         17         37         0         5         7         211         7         3         599         1           Ideal Flow (vphp)         1800	Traffic Volume (vph)	2	0	17	37	0	5	7	211	7	3	599	1
Ideal Flow (vphpi)         1800         100         100         100	Future Volume (vph)	2	0	17	37	0	5	7	211	7	3	599	1
Lane Width (m) 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)         0%         0%         0%         0%         0%           Storage Length (m)         0.0	Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Storage Length (m)         0.0	Grade (%)		0%			0%			0%			0%	
Storage Lanes         0         <	Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Taper Length (m)         7.6         7.6         7.6         7.6           Lane Utili. Factor         1.00         1.	Storage Lanes	0		0	0		0	0		0	0		0
Lane Uhi, Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Taper Length (m)	7.6			7.6			7.6			7.6		
Ped Bike Factor Fit 0.878 0.983 0.996 Fit Protected 0.995 0.958 0.998 Satd. Flow (prot) 0 1525 0 0 1643 0 0 1735 0 0 1745 0 Fit Permitted 0.995 0.958 0.998 Satd. Flow (perm) 0 1525 0 0 1643 0 0 1735 0 0 1745 0 Link Speed (k/h) 50 50 50 50 Link Distance (m) 82.9 57.3 178.5 325.9 Travel Time (s) 6.0 4.1 12.9 23.5 Confl. Peds. (#/hr) Confl. Bikes (#/hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt       0.878       0.983       0.996         Fit Protected       0.995       0.958       0.998         Satd. Flow (port)       0       1525       0       0       1643       0       0       1735       0       0       1745       0         Fit Permitted       0.995       0.958       0.998       0.998       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0	Ped Bike Factor												
Fit Protected       0.995       0.958       0.998         Satd. Flow (prot)       0       1525       0       0       1643       0       1735       0       0       1745       0         Fit Permitted       0.995       0.958       0.998       0       1745       0       1745       0         Link Speed (k/h)       50       50       50       50       50       50       50         Link Distance (m)       82.9       57.3       178.5       325.9       17avel Time (s)       6.0       4.1       12.9       23.5         Confl. Bikes (#hr)            23.5       25.9       23.5       25.9       23.5       25.9       23.5       <	Frt		0.878			0.983			0.996				
Satd. Flow (prot)       0       1525       0       0       1643       0       0       1735       0       0       1745       0         Flt Permitted       0.995       0.958       0.958       0.998       0.998       0.998       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       0.000       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745       0       1745	Flt Protected		0.995			0.958	-		0.998				
FIP Bermitted       0.995       0.958       0.998         Satd. Flow (perm)       0       1525       0       0       1643       0       1735       0       0       1745       0         Link Speed (kh)       50       50       50       50       50       50         Link Distance (m)       82.9       57.3       178.5       325.9       77.3       178.5       325.9         Confl. Rikes (#hr)       0.90<	Satd. Flow (prot)	0	1525	0	0	1643	0	0	1735	0	0	1745	0
Satd. Flow (perm)         0         1525         0         0         1643         0         0         1735         0         0         1745         0           Link Speed (k/h)         50	Flt Permitted		0.995			0.958			0.998				
Link Speed (k/h) 50 50 50 50 50 Link Distance (m) 82.9 57.3 178.5 325.9 Travel Time (s) 6.0 4.1 12.9 23.5 Confl. Peds. (#/hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Satd. Flow (perm)	0	1525	0	0	1643	0	0	1735	0	0	1745	0
Link Distance (m) 82.9 57.3 178.5 325.9 Travel Time (s) 6.0 4.1 12.9 23.5 Confl. Peds. (#hr) Peak Hour Factor 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	Link Speed (k/h)		50			50			50			50	
Iravel Irme (s)       6.0       4.1       12.9       23.5         Confi. Peds. (#/hr)       Confi. Bikes (#/hr)       23.5       20.00       0.90	Link Distance (m)		82.9			57.3			178.5			325.9	
Confl. Peds. (#/hr)         Confl. Bikes (#/hr)         Peak Hour Factor       0.90       1.90       1.90       1.90	Travel Time (s)		6.0			4.1			12.9			23.5	
Contr. Bikes (#/nr)         Peak Hour Factor       0.90	Confl. Peds. (#/hr)												
Peak Hour Factor       0.90       0.9	Confl. Bikes (#/hr)												
Growth Factor         100%         00% <th< td=""><td>Peak Hour Factor</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td><td>0.90</td></th<>	Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Venicles (%)       2%       2	Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Bus Blockages (#hr)       0	Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Parking (#/nr)       Mid-Block Traffic (%)       0%       0%       0%       0%         Adj. Flow (vph)       2       0       19       41       0       6       8       234       8       3       666       1         Shared Lane Traffic (%)             6       8       234       8       3       666       1         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Lane Alignment       Left       Left       Right       Left       Left       Left       Right       Left       Ri	Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Mid-Block frame (%)       0%       0%       0%       0%       0%       0%       0%         Adj. Flow (vph)       2       0       19       41       0       6       8       234       8       3       666       1         Shared Lane Traffic (%)         0       0       47       0       0       250       0       0       670       0         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Lane Alignment       Left       Left       Right       Left       Left       Right       Left       Left       Right       Left       Left       Right       No	Parking (#/hr)		00/			00/			00/			00/	
Adj. Flow (vpn)       2       0       19       41       0       6       8       234       8       3       666       1         Shared Lane Traffic (%)       Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Enter Blocked Intersection       No       No </td <td></td> <td>0</td> <td>0%</td> <td>10</td> <td>11</td> <td>0%</td> <td><u>^</u></td> <td>0</td> <td>0%</td> <td>0</td> <td>2</td> <td>0%</td> <td>4</td>		0	0%	10	11	0%	<u>^</u>	0	0%	0	2	0%	4
Shared Lane Traffic (%)         Lane Group Flow (vph)       0       21       0       0       47       0       0       250       0       0       670       0         Enter Blocked Intersection       No	Adj. Flow (vpn)	2	0	19	41	0	6	ğ	234	ð	3	666	1
Lane Group Flow (vpn)         0         21         0         0         47         0         0         250         0         0         670         0           Enter Blocked Intersection         No	Shared Lane Traffic (%)	^	04	^	0	47	^	^	050	^	•	070	0
Enter Blocked IntersectionNo </td <td>Lane Group Flow (vpn)</td> <td>U</td> <td>ZT</td> <td>U</td> <td>U</td> <td>47</td> <td>U</td> <td>U</td> <td>250</td> <td>U</td> <td>U</td> <td>670</td> <td>U</td>	Lane Group Flow (vpn)	U	ZT	U	U	47	U	U	250	U	U	670	U
Lane Alignment         Left         Right         Right         Left         Right         Left         Right         Left         Right         Left         Right         Right         Right	Enter Blocked Intersection	INO	INO	N0 Diacht	INO	INO	NO Diadat	INO	NO	N0 Diacht	INO	INO	NO Diatet
Median Width(m)       0.0       0.0       0.0       0.0       0.0         Link Offset(m)       0.0       0.0       0.0       0.0       0.0         Crosswalk Width(m)       4.9       4.9       4.9       4.9         Two way Left Turn Lane	Lane Alignment	Leπ	Lett	Right	Leπ	Left	Right	Leπ	Lett	Right	Lett	Left	Right
Link Onset(in)       0.0       0.0       0.0       0.0       0.0         Crosswalk Width(m)       4.9       4.9       4.9       4.9         Two way Left Turn Lane	link Offeet(m)		0.0			0.0			0.0			0.0	
Crosswark Width(m)       4.9       4.9       4.9       4.9       4.9         Two way Left Turn Lane	LINK Offset(m)		0.0			0.0			0.0			0.0	
Headway Factor       1.09<			4.9			4.9			4.9			4.9	
Turning Speed (k/h)     24     14     24     14     24     14     24     14     24     14     14     24     14       Sign Control     Stop     Stop     Stop     Stop     Stop     Stop       Intersection Summary     Area Type:     Other     Other     Control Type: Unsignalized       Intersection Capacity Utilization 50.5%     ICU Level of Service A	Hoadway Easter	1 00	1.00	1 00	1 00	1.00	1.00	1 00	1.00	1.00	1.00	1 00	1.00
Intersection Summary     Stop     Stop     Stop     Stop       Area Type:     Other       Control Type: Unsignalized       Intersection Capacity Utilization 50.5%	Turning Speed (k/b)	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Intersection Summary Area Type: Other Control Type: Unsignalized Intersection Capacity Utilization 50.5% ICU Level of Service A	Sign Control	24	Stop	14	24	Ston	14	24	Ston	14	24	Stop	14
Intersection Summary       Area Type:     Other       Control Type: Unsignalized     Intersection Capacity Utilization 50.5%       Intersection Capacity Utilization 50.5%     ICU Level of Service A	Sign Control		Otop			Otop			Otop			Otop	
Area Type: Other Control Type: Unsignalized Intersection Capacity Utilization 50.5% ICU Level of Service A	Intersection Summary												
Intersection Capacity Utilization 50.5% ICU Level of Service A	Area Type: (	Juner											
Intersection Capacity Utilization 50.5% ICU Level of Service A	Control Type: Unsignalized				17			٨					
Analysis Doriod (min) 16	Analysis Pariod (min) 15	01 30.5%			IC.	O Level		A					

	✓	*	1	1	1	Ŧ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		4Î			स्
Traffic Volume (vph)	131	126	114	109	71	669
Future Volume (vph)	131	126	114	109	71	669
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%		0%			0%
Storage Length (m)	0.0	0.0		0.0	0.0	
Storage Lanes	1	0		0	0	
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.934		0.934			
Flt Protected	0.975					0.995
Satd. Flow (prot)	1589	0	1630	0	0	1736
Flt Permitted	0.975					0.995
Satd. Flow (perm)	1589	0	1630	0	0	1736
Link Speed (k/h)	50		50			50
Link Distance (m)	109.2		52.2			178.5
Travel Time (s)	7.9		3.8			12.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	146	140	127	121	79	743
Shared Lane Traffic (%)			<b>6</b> 1 6	•	•	0.00
Lane Group Flow (vph)	286	0	248	0	0	822
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	4.9		4.9			4.9
Two way Lett Turn Lane	4.00		4.00	4.00		4.00
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	_	14	24	-
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	tion 80.5%			IC	CU Level	of Service I
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ፈቤ			ፈሴ			44		<b>N</b>	1.	
Traffic Volume (vph)	147	531	4	4	896	11	5	0	4	127	1	370
Future Volume (vph)	147	531	4	4	896	11	5	0	4	127	1	370
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0.0	0%	0.0	0.0	0%	0.0	0.0	0%	0.0	0.0	0%	0.0
Storage Length (m)	0.0	0,0	0.0	0.0	0,0	0.0	0.0	0,0	0.0	0.0	0,0	0.0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (m)	76		•	76		•	76		•	76		•
Lane Util, Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.00	0.00	0.00	0.00	0.00	0.00	1.00		1.00		1.00	
Frt		0 999			0 998			0 946			0 850	
Elt Protected		0.989			0.000			0.971		0 950	0.000	
Satd Flow (prot)	0	3276	0	0	3309	0	0	1603	0	1658	1483	0
Elt Permitted	v	0.569	v	Ū	0.953	v	v	0 485	v	0 751	1100	Ŭ
Satd Flow (perm)	0	1885	0	0	3154	0	0	801	0	1311	1483	0
Right Turn on Red	Ū	1000	Yes	Ū	0101	Yes	v	001	Yes	1011	1100	Yes
Satd Flow (RTOR)		1	100		1	100		77	100		234	100
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		446 7			395.2			147 1			52.2	
Travel Time (s)		32.2			28.5			10.6			3.8	
Confl Peds (#/hr)		02.2			20.0			10.0			0.0	
Confl Bikes (#/hr)												
Peak Hour Factor	0 90	0 90	0 90	0.90	0.90	0 90	0.90	0 90	0 90	0.90	0 90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	•	Ţ	· ·	•	Ţ	•	•	Ť	•	•	•	C C
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adi, Flow (vph)	163	590	4	4	996	12	6	0	4	141	1	411
Shared Lane Traffic (%)				•			•	, The second sec	·			
Lane Group Flow (vph)	0	757	0	0	1012	0	0	10	0	141	412	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2	••	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	pm+nt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2	-		6	v		4			8	Ū	
Detector Phase	5	2		6	6		4	4		8	8	
Switch Phase	·	-		Ŭ	Ť					Ŭ	v	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	10.4	31.7		31.7	31.7		31.5	31.5		31.5	31.5	
Total Split (s)	16.0	78.0		62.0	62.0		37.0	37.0		37.0	37.0	
Total Split (%)	13.9%	67.8%		53.9%	53.9%		32.2%	32.2%		32.2%	32.2%	
Maximum Green (s)	10.6	72.3		56.3	56.3		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.4		2.4	2.4		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.7			5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		19.0		19.0	19.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)		10		10	10		10	10		10	10	
Act Effct Green (s)		82.0			82.0			21.8		21.8	21.8	
Actuated g/C Ratio		0.71			0.71			0.19		0.19	0.19	
v/c Ratio		0.56			0.45			0.05		0.57	0.88	
Control Delay		11.5			9.0			0.4		49.4	38.2	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.5			9.0			0.4		49.4	38.2	
LOS		В			А			А		D	D	
Approach Delay		11.5			9.0			0.4			41.1	
Approach LOS		В			А			А			D	
Queue Length 50th (m)		38.8			25.3			0.0		28.9	40.9	
Queue Length 95th (m)		71.6			103.7			0.0		44.5	73.8	
Internal Link Dist (m)		422.7			371.2			123.1			28.2	
Turn Bay Length (m)												
Base Capacity (vph)		1344			2249			275		359	576	
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		0.56			0.45			0.04		0.39	0.72	
Intersection Summary	0.11											
Area Type:	Other											
Cycle Length: 115												
Actuated Cycle Length: 115					( )							
Offset: 35 (30%), Reference	ed to phase	e 2:EBTL a	and 6:VVE	SIL, Start	of Green							
Natural Cycle: 75	. Partal											
Control Type: Actuated-Coc	ordinated											
Iviaximum v/c Ratio: 0.88	7 4				- <b>1</b>							
Intersection Signal Delay: 1	1.4			Ir	ntersectio	1 LUS: B						
Analysis Period (min) 15	1100 85.1%			10	JU Level	of Service	÷E					





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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		đ	1.		¥	
Traffic Volume (vph)	8	136	250	12	7	2
Future Volume (vph)	8	136	250	12	7	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.994		0.973	
Fit Protected	-	0.997		_	0.962	
Satd. Flow (prot)	0	1740	1735	0	1633	0
Fit Permitted		0.997	4=0=	•	0.962	•
Satd. Flow (perm)	0	1740	1735	0	1633	0
LINK Speed (k/h)		50	50		50	
Link Distance (m)		109.2	130.9		57.7	
Travel Time (s)		7.9	9.4		4.2	
Confil. Peas. (#/hr)						
Contil. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.00
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
	100%	100%	100%	100%	100%	100%
	2%	2%	2%	2%	2%	2%
Dus Blockages (#/Nr)	U	U	U	U	U	U
Faiking (#/III) Mid Block Troffic (%)		<u>00/</u>	<u>00/</u>		<u>00/</u>	
Mai Elow (vob)	0	151	0% 279	12	U %	0
Auj. Flow (vpil) Shared Lane Troffic (%)	9	101	210	13	0	2
Lane Group Flow (uph)	0	160	201	0	10	٥
Enter Blocked Intersection	No	No	291 No	No	No	No
Liner Diocked Intersection		Left	Left	Right	Left	Right
Median Width(m)	Leit	0.0	0.0	Tight	25	Ngn
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1 Q	0.0 1 9		0.0 1 9	
Two way Left Turn Lane		т.5	т.5		т.5	
Headway Factor	1 09	1 09	1 09	1 09	1 09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization	tion 24.7%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		स्	4Î		Y	
Traffic Volume (vph)	5	163	171	3	9	3
Future Volume (vph)	5	163	171	3	9	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			0.0	0.0	0.0
Storage Lanes	0			0	1	0
Taper Length (m)	7.6				7.6	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998		0.969	
Flt Protected		0.998			0.963	
Satd. Flow (prot)	0	1742	1742	0	1628	0
Flt Permitted		0.998			0.963	
Satd. Flow (perm)	0	1742	1742	0	1628	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		130.9	64.8		106.6	
Travel Time (s)		9.4	4.7		7.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	6	181	190	3	10	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	187	193	0	13	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.9	4.9		4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: 0	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 23.3%			IC	CU Level	of Service A
Analysis Period (min) 15						

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Traffic Volume (vph)	20	10	197	459	28	36	135	155	123	21	155	26
Future Volume (vph)	20	10	197	459	28	36	135	155	123	21	155	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.6	4.00	4.00	7.6	4.00	4 00	7.6	4.00	4.00	7.6	1.00	1 0 0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.000			0.004			0.000			0.000	
Fft Fit Drote stard		0.883			0.991			0.960			0.983	
Fit Protected	0	0.996	^	^	0.958	^	^	0.984	•	0	0.995	0
Sato. Flow (prot)	U	1535	0	0	1057	0	0	1648	0	U	1/0/	0
Fit Permitted	0	0.990	٥	٥	0.950	0	٥	0.964	٥	٥	0.995	0
Satu. Flow (perm)	U	1535	U	U	1007	U	U	1040	U	U	50	U
Link Speed (k/n)		02 1			07 0			UC			67.4	
		93.1			97.0 7.0			30			07.4	
Confl Dode (#/br)		0.7			7.0			3.9			4.9	
Confl. Peus. (#/III)												
Peak Hour Factor	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Growth Eactor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Rus Blockages (#/hr)	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0	2 /0
Parking (#/hr)	U	0	0	0	0	U	0	0	U	U	U	0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adi Flow (vnh)	22	11	219	510	31	40	150	172	137	23	172	29
Shared Lane Traffic (%)			210	010	01	-10	100	172	107	20	172	20
Lane Group Flow (vph)	0	252	0	0	581	0	0	459	0	0	224	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	Lon	0.0	rugin	2011	0.0	i digitt	2011	0.0	rugitt	2011	0.0	. ugin
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type: C	Other											
Control Type: Unsignalized												
Intersection Capacity Utilizati	on 94.5%			IC	CU Level	of Service	F					
Analysis Period (min) 15												

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations	5	**	**	1	55	1	
Traffic Volume (vph)	130	816	560	238	442	369	
Future Volume (vph)	130	816	560	238	442	369	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	
Grade (%)	0.0	0%	0%	0.0	0%	0.0	
Storage Length (m)	60.0	0,0	0,0	175.0	0.0	0.0	
Storage Lanes	1			1	2	1	
Taper Length (m)	30.0			•	76	•	
Lane Util Factor	1 00	0.95	0 95	1 00	0.97	1 00	
Ped Rike Factor	1.00	0.00	0.00	1.00	0.01	1.00	
Frt				0 850		0 850	
Elt Protected	0 950			0.000	0 950	0.000	
Satd Flow (prot)	1658	3316	3316	1/83	3216	1/183	
Elt Permitted	0 333	3310	3310	1403	0 050	1400	
Satd Flow (perm)	570	2216	3216	1/92	3016	1/92	
Datu. Flow (pellil)	519	3310	5510	1403 Voo	5210	1403 Voo	
				165		01	
Jailu. Fluw (KTUK)		E0	EO	204	EO	ÖI	
Link Speed (k/n)		205.0	00		50		
LINK DIStance (m)		395.2	413.8		54.4		
Travel Time (s)		28.5	29.8		3.9		
Confl. Peds. (#/nr)							
Conti. Bikes (#/nr)	0.00	0.00	0.00	0.00	0.00	0.00	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	144	907	622	264	491	410	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	144	907	622	264	491	410	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(m)		3.5	3.5		7.0		
Link Offset(m)		0.0	0.0		0.0		
Crosswalk Width(m)		4.9	4.9		4.9		
Two way Left Turn Lane							
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	24			14	24	14	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (m)	6.1	30.5	30.5	6.1	6.1	6.1	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA	NA	pm+ov	custom	pm+ov	
Protected Phases	5	2	6	4	4	5	3
Permitted Phases	2	_		6	3	43	
Detector Phase	- 5	2	6	4	4	5	
Switch Phase		_				-	

2024 Total Conditions8: Smyth Road & General Hospital Access Rd
	∕	-	-	•	- <b>\</b>	-		
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3	
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.9	24.4	41.4	11.1	11.1	10.9	29.3	
Total Split (s)	12.0	55.0	43.0	28.0	28.0	12.0	32.0	
Total Split (%)	10.4%	47.8%	37.4%	24.3%	24.3%	10.4%	28%	
Maximum Green (s)	6.1	48.6	36.6	21.9	21.9	6.1	25.7	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.6	3.1	3.1	2.8	2.8	2.6	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.9	6.4	6.4	6.1	6.1	5.9		
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	Min	C-Max	C-Max	None	None	Min	None	
Walk Time (s)			7.0				7.0	
Flash Dont Walk (s)			28.0				16.0	
Pedestrian Calls (#/hr)			10				10	
Act Effct Green (s)	77.5	77.0	61.4	86.2	25.5	41.3		
Actuated g/C Ratio	0.67	0.67	0.53	0.75	0.22	0.36		
v/c Ratio	0.30	0.41	0.35	0.22	0.69	0.70		
Control Delay	8.5	8.5	18.3	1.4	45.4	30.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	8.5	8.5	18.3	1.4	45.4	30.4		
LOS	А	А	В	Α	D	С		
Approach Delay		8.5	13.3		38.6			
Approach LOS		А	В		D			
Queue Length 50th (m)	8.0	40.3	38.1	0.0	53.8	66.3		
Queue Length 95th (m)	21.2	57.0	75.2	7.3	57.9	69.9		
Internal Link Dist (m)		371.2	389.8		30.4			
Turn Bay Length (m)	60.0			175.0				
Base Capacity (vph)	481	2219	1769	1213	807	585		
Starvation Cap Reductn	0	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0		
Reduced v/c Ratio	0.30	0.41	0.35	0.22	0.61	0.70		
Intersection Summary								
Area Type:	Other							
Cycle Length: 115								
Actuated Cycle Length: 11	5							
Offset: 59 (51%), Reference	ed to phase	2:EBTL	and 6:WE	BT, Start o	of Green			
Natural Cycle: 95								
Control Type: Actuated-Co	ordinated							
Maximum v/c Ratio: 0.70								
Intersection Signal Delay:	19.5			Ir	ntersectio	n LOS: B		
Intersection Capacity Utiliz	ation 52.6%	)		10	CU Level	of Service	A	
Analysis Period (min) 15								

Splits and Phases: 8: Smyth Road & General Hospital Access Rd



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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ň	<b>↑</b>	•	1	5	1
Traffic Volume (vph)	93	117	125	81	112	115
Future Volume (vph)	93	117	125	81	112	115
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%	0%		0%	
Storage Length (m)	0.0			40.0	0.0	0.0
Storage Lanes	1			1	1	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1658	1745	1745	1483	1658	1483
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1658	1745	1745	1483	1658	1483
Link Speed (k/h)		50	50		50	
Link Distance (m)		64.8	93.1		57.0	
Travel Time (s)		4.7	6.7		4.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	103	130	139	90	124	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	130	139	90	124	128
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.5	3.5		3.5	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	97			97	97	97
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: 0	Other					
Control Type: Unsignalized						
Intersection Capacity Utilizat	ion 28.9%			IC	CU Level	of Service
Analysis Period (min) 15						