Colonnade Bridgeport

3026 Solandt Road

Transportation Impact Assessment

March 2020 CIMA+ file number: A000979



3026 Solandt Road

Transportation Impact Assessment



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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

- 1. 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;
- 2. 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;
- 3. 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 licensed¹ or registered² professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering □ or transportation planning □.

^{1,2} 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.

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City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	3026 Solandt Road, Kanata
Description of Location	Vacant corner lot at March/Solandt
Land Use Classification	Office
Development Size (units)	
Development Size (m ²)	9,290 m² (100,000 ft²)
Number of Accesses and Locations	2 dedicated to Solandt; 1 shared to Legget; 1 shared to March
Phase of Development	Only 1 Phase
Buildout Year	2021

If available, <u>please attach a sketch of the development or site plan</u> 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.

LandUseType	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m² 🗸
Industrial	5,000 m ²
Fast-food restaurant or coffee shop	100 m ²
Destination retail	1,000 m ²
Gas station or convenience market	75 m ²

* 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>



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?		\checkmark
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		\checkmark

*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

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?	\checkmark	
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		\checkmark
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)?	\checkmark	
Is the proposed driveway within auxiliary lanes of an intersection?	\checkmark	
Does the proposed driveway make use of an existing median break that serves an existing site?	\checkmark	
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		
Does the development include a drive-thru facility?		\checkmark

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?	\checkmark	
Does the development satisfy the Location Trigger?		\checkmark
Does the development satisfy the Safety Trigger?	\checkmark	

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).

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1. Step 1 – Screening Form

With respect to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, the proposed development (described below in Section 2.1) triggered the trip generation and the safety criteria outlined in the City's TIA Step 1 – Screening form. However, based on the location of the proposed development, the location trigger was not met. As only one of three triggers are required, a formal TIA (i.e. completed Steps 1-5) must accompany the subject development application.

2. Step 2 – Scoping

2.1 Description of Proposed Development

Based on the information provided, it is our understanding that the proponent is proposing a new office building located at 3026 Solandt Road, which is located on a vacant parcel of land that was previously occupied by a similar land use in 2014 (i.e. an office building existed on the subject parcel of land and has since been demolished). The new office building being proposed includes approximately 100,000 ft² of total floor area, accompanied by approximately 350 new parking spaces. The proposed development will be built in a single phase with an anticipated buildout year in 2021.

The latest Site Plan shows two direct vehicle driveway connections to Solandt Road, with inter-site connectivity between adjacent land uses to two other driveway connections (i.e. there will be a shared driveway connection to Legget Drive and March Road). All these driveways currently exist and are proposed to be maintained, with the exception of the west driveway connection to Solandt Road is proposed to be relocated towards the east and will function as one-way inbound only. It should be noted that the driveway connections to Solandt Road are currently barricaded.

In the event that inter-site connectivity between adjacent land uses is severed, it has been assumed that all sitegenerated traffic for the subject development will be assigned to the driveway connections to Solandt Road only. This is considered to be a conservative assumption as the available shared driveway connections to Legget Drive and March Road can provide additional capacity.

The local context of the subject site is provided as **Figure 1** and the proposed Concept Plan is provided as **Figure 2**.





2.2 Existing Conditions

Area Road Network

Solandt Road is a two-lane Collector roadway (i.e. a single travel lane per direction) west of the subject site. It extends from Station Road in the south and terminates into a cul-de-sac to the north. Solandt Road provides a connection to the City's existing arterial network at the signalized intersection with March Road. Within the vicinity of the subject site, the speed limit is 50 km/h.

March Road is a four-lane Arterial roadway (i.e. two travel lanes per direction) within the vicinity of the subject site. It extends from the City boundary from the west, passing north and then south until Highway 417. South of Highway 417, March Road continues as Eagleson Road. Within the vicinity of the subject site, the posted speed limit is 80 km/h.

Legget Drive is a two-lane Collector roadway (i.e. two travel lanes per direction) from Terry Fox Drive Drive in the west to Herzberg Road to the east. The posted speed limit along its length is 50 km/h.

Carling Avenue/Station Road is a two-lane roadway (i.e. a single travel lane per direction) southeast of the subject site. Carling Avenue is classified as an Arterial and extends from March road east to Bronson Avenue near Downtown Ottawa. West of March Road it becomes Station Road and is classified as a Local roadway. The posted speed limit within the vicinity of the subject site is 60 km/h.

Farrah Road is a two-lane Local roadway (i.e. a single travel lane per direction) east of the subject site. It extends north of Legget Drive and terminates into a cul-de-sac. Within the vicinity of the subject site, the speed limit is 50 km/h.

Study Area Intersections

March/Terry Fox

The March/Terry Fox intersection is a signalized four-legged intersection. The northbound approach (March Road) consists of three through lanes, two left-turn lanes and a single channelized right-turn lane. The westbound approach (Terry Fox Drive) consists of two through lanes, two left-turn lanes and a single channelized right-turn lane. The southbound approach (March Road) consists of three through lanes, a single left-turn lane and a single channelized right-turn lane. The eastbound approach (Terry Fox Drive) consists of two through lanes, two left-turn lanes and a single channelized right-turn lane.



All possible movements are permitted at this location.



March/Solandt

The March/Solandt intersection is a signalized four-legged intersection. The northbound and southbound (March Road) approaches each consist of two through lanes, a single left-turn lane and a single channelized right-turn lane. The westbound approach (Solandt Road) consists of two left-turn lanes and a single shared through/channelized right-turn lane. The eastbound approach (Solandt Road) consists of a single through lane, a single left-turn lane and a single channelized right-turn lane.



All possible movements are permitted at this location.

March/Carling

The March/Carling intersection is a signalized four-legged intersection. The northbound approach (March Road) consists of two through lanes, a single auxiliary "slot-in" left-turn lane and a single channelized right-turn lane. The westbound approach (Carling Avenue) consists of a single shared through/left-turn lane and a single channelized right-turn lane. The southbound approach (March Road) consists of two through lanes, two left-turn lanes and a single right-turn lane. The eastbound approach consists of a single shared through/left-turn lane and a single channelized right-turn lane.



All possible movements are permitted at this location.

Solandt/Legget

This intersection is a signalized four-legged intersection. All approaches consist of a single left-turn lane and a single shared through/rightturn lane.

All possible movements are permitted at this location.



Existing Driveways to Adjacent Developments

On Solandt Road, there are two adjacent driveway connections between March Road and Legget Drive. One driveway is located approximately 170 m east of March Road, on the south side of Solandt Road (to/from an office land use). The other driveway connection is located approximately 110 m east of March Road, on the north side of Solandt Road (to/from an office land use). All possible movements are permitted at both driveway connections.

On Solandt Road, there are two adjacent driveway connections between March Road and Hines Drive. One driveway is located approximately 60 m west of March Road, on the south side of Solandt Road (to/from a gas station land use). The other driveway connection is located approximately 105 m west of March Road, on the north side of Solandt Road (to/from an office land use). All possible movements are permitted at both driveway connections.

On Legget Drive, there are eight driveway connections between Solandt Road and Farrar Road. From north to south and on the east side of Legget Drive, there is a driveway located at 40 m (to/from an office land use), 130 m, 165 m (to/from an office land use), 225 m (to/from an office land use) and 290 m south of Solandt Road (to/from an office land use), respectively. From north to south and on the west side of Legget Drive, there is a driveway located at 130 m (to/from an office land use), 165 m (to/from an office land use), 215 m (to/from an office land use) and 290 m (to/from an office land use), 165 m (to/from an office land use), 215 m (to/from an office land use) and 290 m (to/from an office land use) south of Solandt Road, respectively. All possible movements are permitted at these driveway connections.

On March Road, there is one driveway connection within 200 m of the subject site driveway connection, located approximately 50 m south of Solandt Road, on the west side of March Road (to/from a gas station land use). This driveway connection is restricted to right-in/right-out only.

As depicted in **Figure 2**, two driveway connections are proposed to serve the subject site on Solandt Road. These driveway connections will be located approximately 45 m apart and will be located approximately 60 m and 115 m east of March Road, respectively. The proposed driveway located 60 m east of March Road will be restricted to one-way inbound traffic only and the driveway located 115 m east of March Road will accommodate all movements.



Pedestrian/Cycling Network

The sidewalk network in the vicinity of the site is well developed with direct connections offered to all study area intersections. Sidewalks are provided on both sides of Solandt Road between March Road and Legget Drive. On March Road, sidewalks are provided on the side of the road closer to the proposed development. Sidewalks are provided on both sides of Legget Drive and Farrar Road. Sidewalks are provided on both sides of Station Road and Carling Avenue at the intersection with March Road, although they are discontinued further away from the intersection.

With respect to cyclists and according to the Ottawa Cycling Plan, dedicated on-street bike lanes are provided on both sides of March Road and on Legget Drive west of Solandt Road. Paved shoulder serving as bike lanes are provided on both sides of Carling Avenue. The following **Figure 3** depicts the bike facilities within the study area (the magenta line indicates existing paved shoulders and the red line indicates existing bike lanes).



Figure 3: Bicycle Network Within Study Area (Source: NCC Cycling Map 2019)

Transit Network

Transit service within the vicinity of the site is currently provided by OC Transpo Routes 63, 64, 66, 166, 266, 660 and 674. Route 63 is a Rapid bus route while Routes 660 and 674 are limited service routes providing service to high schools. OC Transpo Stops are provided on all study area roadways except for Station Road.

The follow Figure 4 depicts study area transit routes.

OC Transpo Route 63 operates on weekdays with approximate 15-minute headways between 5 AM to 8AM and between 3PM to 9PM. Beyond this time period (i.e. late morning, early afternoon and on weekends) this route reduced to approximate 30 minute headways. This route runs 24 hours a day, 7 days a week.





Figure 4: Transit Routes Within Study Area (Source: OC Transpo System Map)

Area Traffic Management

There is currently no traffic calming measures within the study area.

Peak Hour Travel Demands

With respect to the City's TIA Guidelines and as confirmed by City Staff, the following study area intersections were selected for analysis purposes. Based on the most recent available data listed below, **Figure 5** depicts the weekday morning and afternoon peak hour traffic counts for the study area intersections, and depicted in **Figure 6** are the same peak hour volumes for active modes. Detailed traffic count data is included as **Appendix A**.

- + March/Terry Fox Apr 11, 2018
- + March/Solandt Aug 10, 2016
- Solandt/Legget Apr 11, 2017
- + March/Carling Aug 10 ,2016





Figure 5: Existing Study Area Peak Hour Motorized Vehicle Volumes



Figure 6: Existing Study Area Peak Hour Non-Motorized Volumes

Existing Road Safety Conditions

The most recent collision history for the past five-years was obtained from the City of Ottawa (i.e. available study area collision data for the years 2014 – 2018, inclusive). The collision data included all collisions occurring at the study area intersections and the roadway segments connecting between the study area intersections (i.e. Solandt Road, Legget Drive and March Road in-between the study area intersections).

Based on the collision data provided, most collisions within the study area (90%) involved only property damage, indicating low impact speeds, while 9% involved personal injuries and 1% involved fatalities. The primary cause of collisions in the area included rear end (53%) and turning movement (20%) type collisions.



It is also noteworthy that within the five-years of recorded collision data, there was no collisions that involved cyclists and there were no collisions involving pedestrians, although it should be noted that pedestrian data was unavailable in 2017.

The source collision data, as provided by the City of Ottawa is provided as **Appendix B**. The related analysis can be found in **Section 4.3**, and **Appendix I**.

2.3 Planned Conditions

Planned Study Area Transportation Network Changes

Transit Projects

As part of the City's Stage 2 OLRT, LRT will be extended west along the Confederation Line. The existing Transitway Station at Moodie will be converted to a terminal station serving as the western terminus of the Confederation line and March Road will be widened to accommodate dedicated a Bus Rapid Transit (BRT) facility from Moodie Station, along the frontage of the proposed development. The completion of the City's Stage 2 OLRT extension is planned for 2025, which is after the planned build-out of the proposed development in 2021.

Road Projects

As part of the Ottawa Cycling Plan, there are plans to implement on-street bike lanes on Solandt Road west of March Road and to extend the bike lanes on Legget Drive south of Solandt Road. The completion of these projects is planned between 2020-2025.

Road resurfacing/renewal is scheduled to occur on March Road, Solandt Road and Legget within a 1-2 year timeframe (i.e. 2020-2021), according to data found using the City's maps.ottawa.ca website.

Other Area Development

Using the City's ottawa.ca website, Development Application Search tool, a development at 2707 Solandt Road is currently undergoing a Zoning By-law Amendment for an 8-storey, 198,615 ft² office building, which is within the vicinity of the subject site. As such, the projected impact of this area development will be accounted for in the subsequent analysis.

2.4 Study Area

As previously mentioned, City Staff confirmed the following study area intersections for analysis purposes:

- March/Terry Fox
- + Solandt/March
- + Solandt/Legget
- + March/Carling

2.5 Time Periods

Given the surrounding road network (e.g. Solandt Road and March Road) typically experience the heaviest traffic volumes during the weekday morning and afternoon peak hours and given office type land uses typically generate the most traffic during the same peak weekday morning and afternoon peak hours, this assessment considered weekday morning and afternoon peak hours for analysis purposes only.



2.6 Horizon Years

For the purpose of this assessment, two horizon years were considered for analysis purposes, which are consistent with the City's TIA Guidelines and the approximate phasing of the proposed development:

- + 2021 Full build-out
- + 2026 5-years beyond build-out

2.7 Exemptions Review

With respect to the City's TIA Guidelines and given the nature of the proposed development, the following analysis (identified in the 2017 Transportation Impact Assessment Guidelines) can be exempt:

Module	Element Exemption Criteria			
Design Review				
4.1 Development Design	4.1.2 Circulation and Access	Required for Site Plans	Not Exempt	
	4.1.3 New Street Network	Required for Plans of Subdivision	Exempt	
4.2 Derking	4.2.1 Parking Supply	Required for Site Plans	Not Exempt	
4.2 Parking	4.2.2 Spillover Parking	Exempt		
Network Impact				
4.5 Transportation Demand Management	All Elements	Not required for non-residential Site Plans expected to have fewer than 60 employees and/or students on location at any given time	Not Exempt	
4.6 Neighbourhood Traffic Management	Neighbourhood Affic Management 4.6.1 Adjacent Neighbourhoods Required when the development relies on local or collector streets for access and tota volumes exceed ATM capacity thresholds		Not Exempt	
4.8 Network Concept All Elements		Required when development is projected to generate more than 200 person-trips during the peak hour, in excess of the equivalent volume permitted by the established zoning	Exempt	

Table 1: Module Exemption Review

The projected site-generated traffic is not a Plan of Subdivision, will not supply parking at a rate 15% below constrained demand, is not projected to change the role or function of the surrounding road network and it is not projected to generate more than 200 person-trips during the peak hour, in excess of the equivalent volume permitted by the established zoning. Therefore, a select number of modules (summarized in **Table 1**) are exempt from this Transportation Impact Assessment.

3. Step 3 – Forecasting

3.1 Trip Generation

As previously described, the proposed office will be constructed in a single phase. The new office building being proposed includes approximately 100,000 ft² of total floor area, accompanied by approximately 350 new parking spaces. The proposed development will be built in a single phase with an anticipated buildout year in 2021.

For the purpose of this assessment, projected site-generated traffic was estimated using appropriate trip generation rates from the 10th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Based on the location and type of the development, the following **Table 2** summarizes appropriate ITE trip generation rates for estimating projected site-generated traffic. It should be noted that the first listed equation is an average vehicle trip generation rate and the second equation is a "line of best fit" equation that more accurately represents the trend of vehicle trip generation based on land use size. Typical industry practice is the use the "line of best fit" equation for site-generated traffic projections, if available.

Table 2: ITE	Trip	Generation	Rates
--------------	------	------------	-------

Land Use	ITE Land Use Code	AM Peak	PM Peak		
General Office Building Urban/Suburban		T = 1.16 (X); or T = 0.94 (X) – 26.49	T = 1.15 (X); or Ln (T) = 0.95 Ln (X) + 0.36		
Notes: $T = Average Vehicle$ $X = 1,000 \text{ ft}^2 \text{ of Gross}$	Trip Ends : Floor Area				

With respect to ITE trip generation rates, the data used to develop these rates only include vehicle trips (i.e. walking, cycling or transit trips are not captured), and the data collection surveys are typically conducted in highly-suburban locations with limited access to transit and dedicated non-motorized facilities (e.g. sidewalks, bike lanes, etc. are generally limited). To properly consider the multi-modal trips generated by the proposed development, projected site-generated traffic (estimated using ITE trip generation rates) is converted to projected site-generated person trips, which can then be subdivided into different modes based on area travel patterns and available facilities/network connections (e.g. the availability of transit, walking and cycling facilities).

To convert projected ITE vehicle trips to person trips, an auto occupancy factor and non-auto trip factor is applied to the ITE trip generation rates. With respect to the City's TIA Guidelines, and based on available American Census data, the typical modal share of non-auto person trips is approximately 10% and the typical auto occupancy is 1.15. Therefore, when combined, a factor of 1.28 is used to convert vehicle trips to person trips.

Based on the foregoing, the projected weekday morning and afternoon peak hour person trip generation for the proposed development is summarized in **Table 3**



Table 3: Modified Person Site Trip Generation

Land Use	Area (ft²)	AM Pea	k (Person	Trips/h)	PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
General Office Building	100,000	132	22	154	23	123	146

As summarized in **Table 3**, the proposed development is projected to generate an approximate two-way total of 154 and 146 person trips/h during weekday morning and afternoon peak hours, respectively. Directional distribution (i.e. inbound vs outbound trips) was obtained from the ITE trip generation manual.

Determining the number of person trips arriving/departing by travel mode, total projected person trips are subdivided by mode share values, derived from the 2011 TRANS National Capital Region (NCR) Origin-Destination (OD) survey data, the nature/context of the proposed development and our local area knowledge. Key factors that are taken into consideration, beyond NCR OD survey data, include; proximity and quality of transit, pedestrian and cycling facilities, purpose of trips, etc.

Travel Mode Shares

With respect to NCR OD survey data, the proposed development is located in the Kanata - Stittsville district area Traffic Assessment Zone (TAZ). The average AM and PM modal split from/to/within this district indicates that trips person trips consist of 65% auto drivers, 16% auto passengers, 11% transit, 1% bicycle and walk, and 7% other. Considering NCR OD survey data and other key factors (e.g. proximity and quality of non-auto facilities, nature/context of the proposed development, etc.), the following summarizes the projected modal split of site-generated traffic for the subject development.

65%	Auto Driver;
15%	Auto Passenger;
15%	Transit; and
+ 5%	Walk and Cycling.
100%	_

Based on the foregoing, the vehicle trips generated by the proposed development was calculated, and summarized in **Table 4** below.

Travel Mode	Mode Share	(P	AM Peal erson Trij	k os/h)	PM Peak (Person Trips/h)		
		In	Out	Total	In	Out	Total
Auto Driver	65%	86	15	101	15	80	95
Auto Passenger	15%	20	3	23	4	19	23
Transit	15%	20	3	23	3	18	21
Non-motorized ¹	5%	6	1	7	1	6	7
Total Person Trips	100%	132	22	154	23	123	146
Total 'New' Auto	86	15	101	15	80	95	

Table 4	4: Pro	iected	Site	Trip	Generation
		10000	0.00		

¹ Non-motorized trips include cyclists and pedestrians.

As shown in **Table 4**, the proposed office development is projected to generate approximate two-way vehicle volumes of 101 veh/h and 95 veh/h during weekday morning and afternoon peak hours, respectively.

3.2 Trip Distribution

The projected distribution of site-generated traffic was derived based on existing travel patterns, the site's connections to/from the surrounding road network, and our local area knowledge. (e.g. the location and proximity of local residential communities, and the HWY 417). For analysis purposes, the following approximate distribution of projected site-generated traffic was assumed:

- 20% to/from the east via HWY 417 (via March Road);
- 15% to/from the east via Carling Avenue (via Legget Drive or March Road);
- 5% to/from the west via Terry Fox Drive;
- 5% to/from the west via HWY 417 (via March Road);
- 10% to/from the north via March Road; and
- + 45% to/from the south via March Road.

100%

3.3 Trip Assignment

Based on the above assumed distribution, projected site-generated traffic was assigned to the study area network and is depicted in the following **Figure 7**.

As previously mentioned, there are existing driveway connections to Legget Drive and March Road that can provide access/egress/inter-site connectivity between the subject site and adjacent land uses. However, in the event that inter-site connectivity between adjacent land uses is severed, it has been assumed that all site-generated traffic for the subject development will be assigned to the driveway connections to Solandt Road only. This is considered to be a conservative assumption as the available shared driveway connections to Legget Drive and March Road can provide additional capacity.



Figure 7: Projected Site-Generated Traffic

3.4 Background Network Traffic

Changes to Transportation Network

At this time, and according to Ottawa's Transportation Master Plan (TMP), there are currently no foreseeable changes to the transportation network within the vicinity of the subject site. However, it is important to note that the City currently has plans to ultimately provide a dedicated Bus Rapid Transit (BRT) facility in the median of March Road. As the ability to provide additional road capacity within the study area is considered to be somewhat limited and not in-line with the City's policies/objectives, an increase in area transit service will be required to support future growth.

General Background Growth

Novatech recently prepared a TIA study for a proposed development located at 2505-2707 Solandt Road, which is within the vicinity of to the subject site. Given the proximity of these two developments and given these developments have approximately the same timeline for construction, the following assumptions related to background traffic growth (included in the Novatech TIA study) will be incorporated in the subsequent analysis included herein.

The Novatech TIA study reviewed historical traffic count data at the March/Solandt intersection from July 2010, June 2011, March 2013, and August 2016, which revealed a 0.5% annual growth rate. The City's long-range transportation model (NRC TRANS model) was also examined for the study area, which indicated an annual growth between 0 - 1% from the year 2011 and 2031 for the study area. As such, and combined with local area knowledge, an annual growth rate of 0.5% was applied to March Road, Carling Avenue, and Terry Fox Drive.

The Novatech TIA study also identified that there is projected to be a 22% increase in employment within Kanata - Stittsville Transportation Analysis Zone (TAZ), which equates to approximately 1% of annual growth from 2011 to 2031. To account for this growth, an annual background traffic growth rate of 1% was applied to Legget Drive and Solandt Road.

Other Area Developments

Using the City's online Development Application Tool, developments on 2505-2707 Solandt Road, which described in the previous section, were identified to have impacts on the study area. As such, the projected site-generated traffic for the proposed on 2505-2707 Solandt Road development will be included in the background traffic volumes included herein.

In addition to the 2505-2707 Solandt Road Development, the Novatech TIA study also identified projected traffic volumes generated by The Kanata North Urban Expansion Area (KNUEA). The KNUEA is located north of the Kanata - Stittsville district area TAZ and will be a community consisting of approximately 3000 dwelling units and over 15 Ha mixed use development (e.g. commercial and other service type land uses). Novatech assumed a certain number of additional traffic generated by the KNUEA for the 2026 horizon year and for the purpose of this assessment, 50% of the projected volumes generated by the KNUEA for the 2026 horizon year was assumed for the 2021 horizon year. Excerpts from both the 2505-2707 Solandt Road TIA and KNUEA TMP are included as **Appendix C**.

Based on the foregoing, the following **Figure 8** and **Figure 9** depict projected background traffic volumes for the 2021 and 2026 horizon years, respectively.





Figure 8: Background Traffic Volumes 2021



Figure 9: Background Traffic Volumes 2026

3.5 Demand Rationalization

The following section summarizes the intersection capacity analysis of existing, future background and future total volume scenarios.

Using the intersection capacity analysis software Synchro (v9), study area intersections were assessed in terms of vehicle delay, 95th percentile queues, a volume-to-capacity ratio (v/c) and a corresponding Level of Service (LOS). It should be noted that the overall performance of a *signalized* intersection is calculated as a weighted v/c ratio and assigned a corresponding LOS, with critical movements assigned a LOS based on their respective v/c ratio. The overall performance of an *unsignalized* intersection is a LOS output from Synchro, which is based on an Intersection Capacity Utilization (ICU) method, and critical movements are assigned a LOS based on delay.

Existing and Background Conditions

The following **Table 5**, **Table 6** and **Table 7** summarize existing and projected background conditions at study area intersections, in the absence of the proposed development. The objective of this analysis is to determine if network improvements are, or will be required to support background traffic. Detailed Synchro output data for existing and background conditions is provided as **Appendix D**.

As shown in **Table 5**, study area intersections currently operate with an overall LOS 'E' or better during weekday morning and afternoon peak hours. With the exception of the March/Terry Fox intersection, there are a number of critical movements operating at or above capacity (i.e. LOS 'E' or 'F") during peak hours at study are intersections. These critical movements also operate with long 95th percentile queues and delays.

Assuming no signal timing plan or network modifications, **Table 6** depicts how an increase in background traffic volumes is projected to result in more movements operating at or above capacity, longer queues and more delay. In order to mitigate the negative impacts of increased background traffic growth, the following network modifications would be required to support the projected increase in background traffic growth for the 2021 horizon year:

March Road & Terry Fox Drive

- + Convert 1 southbound through lane to an exclusive southbound left-turn lane
- + Increase signal cycle length to 130 seconds and optimize phasing

March Road & Solandt Road

- + Add an additional southbound through lane
- + Increase signal cycle length to 130 seconds and optimize phasing

March Road & Carling Avenue

- + Add an additional northbound through lane
- + Increase signal cycle length to 130 seconds and optimize phasing

Solandt Road & Legget Drive

- + Add an auxiliary southbound right-turn lane with 40 m of storage
- + Optimize signal phasing

Assuming optimized signal timing plans and the above network modifications, **Table 7** depicts how an increase in background traffic volumes is again projected to result in movements operating at or above capacity, long queues and long delays at study area intersections during peak hours. In order to mitigate the negative impacts of increased



background traffic growth, the following network modifications would be required, in addition above mentioned required network modifications, to support the projected increase in background traffic growth for the 2026 horizon year:

March Road & Terry Fox Drive

- + Add an additional southbound through lane
- + Optimize signal phasing

March Road & Solandt Road

- + Add an additional northbound through lane
- + Implement dual southbound left-turn lanes
- + Implement dual northbound left-turn lanes
- + Optimize signal phasing

March Road & Carling Avenue

- + Add an additional southbound through lane
- + Optimize signal phasing

Given the above network modifications will require significant road widenings, which are considered not in-line with the City's policies/objectives, an increase in area transit service will be required to support future growth. With an increase in area transit service, study area intersections will continue to operate at or near capacity; however, there will be notable shift towards sustainable travel modes (i.e. there will be a higher percentage of transit users and non-motorized trips).

Adjustments to Background Network Demands

For the purpose of this assessment and given there are currently no foreseeable plans to significantly improve transit service within the study area, adjustments to demand modal splits (e.g. increasing the project percentage of transit users) was not considered for the subsequent analysis. It should be noted that once March Road is widened to accommodate a dedicated Bus Rapid Transit (BRT) facility, it is anticipated that the transit modal share for the TAZ will increase, with a proportional reduction in the auto modal share. However, with this anticipated shift in modal shares, study area intersections are projected to continue operating at capacity (i.e. the projected increases in person trips to/from/within the surrounding area will need to be accommodated by modes other than the private automobile, such as transit).

		AM Peak Hour				PM Peak Hour			
Movement	Lanes	v/c	Delay (s)	LOS	Queue (m)	v/c	Delay (s)	LOS	Queue (m)
March Road/Terry Fox Drive - Actuated-Coordinated Signal									
EBL	2 L	0.33	59.0	A	22	0.62	57.4	В	44
EBT	2 T	0.66	47.7	В	83	0.18	33.5	A	23
EBR	1 R	0.47	7.1	A	21	0.69	14.9	В	53
WBL	2 L	0.27	58.1	A	18	0.55	55.4	A	39
WBT	2 T	0.19	39.3	A	23	0.45	38.4	A	53
WBR	1 R	0.10	0.4	A	0	0.59	10.8	A	36
NBL	2 L	0.61	59.6	В	56	0.66	56.9	В	m41.1
NBT	3 T	0.24	36.2	A	38	0.70	21.4	В	#159.0
NBR	1 R	0.30	12.0	A	29	0.16	2.0	A	m4.1
SBL	1 L	0.86	69.6	D	#176.8	0.33	54.2	A	26
SBT	3 T	0.49	30.6	A	99	0.33	31.0	A	52
SBR	1 R	0.21	5.1	A	14	0.18	2.1	A	5
Overall		0.57	37.7	Α	-	0.69	28.7	В	-
		Mar	ch Road/Sola	ndt Road - A	ctuated-Coor	dinated Signa	al		
EBL	1 L	0.28	64.3	A	19	0.48	57.2	A	38
EBT	1 T	0.42	53.9	А	42	0.18	45.6	А	19
EBR	1 R	0.09	0.1	А	0	0.46	1.0	А	0
WBL	2 L	0.26	60.6	А	15	0.95	71.1	E	#119.1
WBT/R	1 T/R	0.55	53.6	Α	58	0.66	33.7	В	59
NBL	1L	0.97	41.0	E	m#205.8	0.41	9.8	А	m8.4
NBT	2 T	0.32	2.7	А	m15.6	0.82	14.4	D	#273.7
NBR	1 R	0.57	4.1	А	m11.2	0.08	0.2	А	m0.0
SBL	1 L	0.59	30.2	А	17	0.63	66.6	В	m#26.3
SBT	2 T	1.05	66.8	F	#216.1	0.59	22.3	А	133
SBR	1 R	0.25	1.7	А	1	0.10	3.9	А	m7.0
Overall	<u> </u>	0.97	32.6	Е	-	0.84	24.2	D	-
		Le	gget Drive/So	olandt Road -	Semi Act-Un	coord Signal		-	
EBL	1 L	0.68	15.9	В	74	0.37	40.6	А	23
EBT/R	 1 T/R	0.46	7.6	A	41	0.22	13.6	A	13
WBL	1L	0.01	12.0	A	1	0.21	35.1	A	18
WBT/R	1 T/R	0.04	10.8	A	- 4	0.52	39.9	A	50
NBL	1L	0.33	20.3	, . А	26	0.68	26.8	B	61
NBT/R	1 T/R	0.43	18.4	Α.	48	0.11	7.9	Δ	12
SBL	11	0.11	17.1	Α.	10	0.01	16.7	Α	2
SBT/R	1 T/R	0.45	18.5	A	50	0.93	42.4	F	#231.6
Overall	11/1	0.55	14.8	A	-	0.59	34.6	<u> </u>	-
overui		Marc	h Road/Carlin	ng Avenue - 4	Actuated-Coo	rdinated Sigr	al		
FBI /T	1 T/I	0.47	55.8		35	0.16	38.3	Δ	17
FBR	1 R	0.03	0.2	Δ	0	0.09	0.5	Δ	0
WBI /T	1 T/I	0.03	49.0	Δ	22	0.60	53.1	A	49
WBR	1 R	0.49	10.1	Δ	18	0.00	27.9	C C	58
NBI	11	0.49	61.9	<u> </u>	10	0.73	53.0	<u> </u>	10
NBT	2 T	0.40	43.6	F	#302.3	0.25	24.9	<u>с</u>	107
NRD	2 I 1 P	0.33	45.0 2 E		#392.3	0.75	0.1	<u> </u>	197
	21	0.10	3.3	R		0.64	52.2	R	<u> </u>
SDL	2 L	0.68	77.3	В	11135.0	0.64	52.3	В	11150.9
SBI	21	0.45	8.7	A	m139.8	0.88	30.7	D	m#357.0
SBR	IR	0.14	2.9	A	m14.9	0.05	2.9	A	m2.7
Overall	05 th norson		34.8		-	0.85	30.3	D	-
#: volume for the	m: volume for the 95 th percentile queue is metered by an upstream signal #: volume for the 95 th percentile cycle exceeds capacity.								

Table 5: Study Area Intersection Operations - Existing Conditions

#: volume for the 95th percentile cycle exceeds capacity



		AM Peak Hour				PM Peak Hour			
Movement	Lanes	vlc	Delay	1.05	Queue	vic	Delay	1.05	Queue
		V/C	(s)	200	(m)	V/C	(s)	200	(m)
March Road/Terry Fox Drive - Actuated-Coordinated Signal									
EBL	2 L	0.39	59.9	A	25	0.71	60.9	С	51
EBT	2 T	0.68	47.9	В	88	0.19	33.4	A	24
EBR	1 R	0.52	7.2	A	23	0.73	18.1	С	63
WBL	2 L	0.27	58.1	A	18	0.55	55.5	A	39
WBT	2 T	0.19	39.1	A	24	0.48	38.8	A	56
WBR	1 R	0.13	0.6	A	0	0.67	16.0	В	53
NBL	2 L	0.62	59.1	В	58	0.74	58.5	С	m41.4
NBT	3 T	0.35	39.9	A	56	0.86	25.4	D	m#194.2
NBR	1 R	0.30	13.8	A	33	0.17	1.7	A	m2.8
SBL	1 L	1.01	97.6	F	#209.3	0.42	55.4	A	34
SBT	3 T	0.68	35.3	В	147	0.42	32.7	A	66
SBR	1 R	0.26	5.2	A	17	0.22	3.6	A	9
Overall		0.63	41.5	В	-	0.82	31.5	D	-
		Mar	ch Road/Sola	ndt Road - A	ctuated-Coor	dinated Signa	al	-	
EBL	1 L	0.28	64.3	A	19	0.48	57.2	A	38
EBT	1 T	0.44	54.2	A	45	0.18	44.7	А	19
EBR	1 R	0.09	0.1	А	0	0.46	1.0	А	0
WBL	2 L	0.30	61.4	А	17	1.04	91.8	F	#138.3
WBT/R	1 T/R	0.56	53.3	А	60	0.76	39.0	С	74
NBL	1 L	0.98	33.0	E	m#171.1	0.48	18.2	А	m10.2
NBT	2 T	0.40	3.0	А	m18.8	0.97	23.1	E	#345.8
NBR	1 R	0.63	5.3	В	m11.8	0.09	0.2	А	m0.0
SBL	1 L	0.97	82.6	E	m#86.7	0.78	95.7	С	m#33.6
SBT	2 T	1.39	208.1	F	#321.8	0.70	26.6	В	#163.4
SBR	1 R	0.25	4.5	А	m6.2	0.10	4.1	А	m8.3
Overall		1.20	80.5	F	-	0.97	32.2	E	-
		Le	gget Drive/So	olandt Road -	Semi Act-Un	coord Signal			•
EBL	1 L	0.68	16.3	В	77	0.46	45.3	А	25
EBT/R	1 T/R	0.60	11.3	А	70	0.22	14.9	А	19
WBL	1 L	0.01	7.0	А	1	0.18	31.7	Α	20
WBT/R	1 T/R	0.05	5.9	А	6	0.71	44.1	С	91
NBL	1 L	0.34	20.9	А	27	0.72	33.8	С	83
NBT	1 T/R	0.45	19.1	А	52	0.10	7.0	А	18
SBL	1 L	0.19	18.4	А	16	0.01	22.3	А	4
SBT/R	1 T/R	0.46	19.1	А	52	1.03	69.6	F	#276.6
Overall	· ·	0.54	15.7	А	-	0.87	48.7	D	-
		Marc	h Road/Carlir	ng Avenue - A	ctuated-Coo	rdinated Sign	al		
EBL/T	1 T/L	0.47	55.8	A	35	0.16	38.0	А	17
EBR	1 R	0.03	0.2	А	0	0.09	0.5	А	0
WBL/T	1 T/L	0.27	49.0	А	22	0.60	52.6	А	49
WBR	, 1 R	0.50	10.1	А	19	0.77	30.5	С	63
NBL	1 L	0.48	61.9	A	41	0.23	53.9	A	19
NBT	2 T	1.10	81.1	F	#460.1	0.90	33.5	D	#283.8
NBR	1 R	0.10	3.6	А	9	0.04	0.1	A	0
SBL	21	0.68	74.9	B	m26.0	0.65	50.3	B	m49.0
SBT	2 T	0.63	12.8	B	m156 5	0.98	40.3	F	m#400.0
SBR	1 R	0.00	29	Δ	m10.6	0.05	25	Δ	m1 8
Overall		1.01	52 3	F	-	0.94	37.4	F	-
m: volume for the	95 th percen	Overall 1.01 52.3 F - 0.94 37.4 E - m: volume for the 95 th percentile queue is metered by an upstream signal							

Table 6: Study Area Intersection Operations - 2021 Background Conditions

#: volume for the 95th percentile cycle exceeds capacity



			AM Pea	ak Hour			PM Pea	ak Hour	
Movement	Lanes	v/c	Delay (s)	LOS	Queue (m)	v/c	Delay (s)	LOS	Queue (m)
		Marc	h Road/Terry	Fox Drive - A	Actuated-Coo	rdinated Sigr	nal		
EBL	2 L	0.44	61.0	А	28	0.87	79.6	D	#71.1
EBT	2 T	0.69	48.1	В	90	0.18	35.3	А	26
EBR	1 R	0.53	7.1	А	23	0.80	31.2	С	96
WBL	2 L	0.28	58.2	А	18	0.73	72.4	С	#47.0
WBT	2 T	0.20	39.1	А	25	0.50	43.3	А	64
WBR	1 R	0.17	0.8	А	0	0.85	40.1	D	104
NBL	2 L	0.62	46.8	В	58	0.69	55.2	В	m47.6
NBT	3 T	0.40	32.9	А	75	0.89	44.0	D	m158.0
NBR	1 R	0.27	12.6	А	30	0.16	9.7	А	m7.6
SBL	2 L	0.79	62.4	С	#88.4	0.45	65.6	А	24
SBT	2 T	1.27	158.6	F	#399.3	0.69	40.9	В	136
SBR	1 R	0.34	13.0	А	40	0.24	2.1	А	5
Overall		1.05	80.2	F	-	0.81	44.4	D	-
		Mar	ch Road/Sola	ndt Road - A	ctuated-Coor	dinated Signa	al		
EBL	1 L	0.28	64.3	А	19	0.50	63.0	А	41
EBT	1 T	0.44	54.2	А	45	0.19	49.1	А	20
EBR	1 R	0.09	0.1	А	0	0.48	1.1	А	0
WBL	2 L	0.30	61.4	А	17	0.98	79.1	E	#140.3
WBT/R	1 T/R	0.56	53.3	А	60	0.72	37.9	С	74
NBL	, 1 L	0.98	76.7	E	m#277.9	0.48	33.5	A	m41.1
NBT	2 T	0.47	13.2	А	110	1.10	85.7	F	#448.8
NBR	1 R	0.63	9.3	В	116	0.09	6.9	Α	m7.6
SBL	1L	1.15	106.9	F	m#44.1	0.85	120.1	D	m#24.8
SBT	3 T	1.22	129.6	F	m#120.2	0.55	42.6	A	133
SBR	1 R	0.25	4.3	A	m2.9	0.09	2.5	A	m0.9
Overall		1.11	67.9	F	-	1.05	58.1	F	-
		Le	gget Drive/Sc	olandt Road -	Semi Act-Un	coord Signal		-	
EBL	1 L	0.68	16.2	В	78	0.29	27.4	А	22
EBT/R	1 T/R	0.60	11.4	A	71	0.18	12.0	A	17
WBL	11	0.01	7.3	A	1	0.15	23.3	A	19
WBT/R	1 T/R	0.05	6.0	A	6	0.60	29.2	A	84
NBI	11	0.30	19.9	A	26	0.53	12.4	A	45
NBT/R	1 T/R	0.47	19.5	A	54	0.14	7.6	A	18
SBL	11	0.19	18.7	A	16	0.02	19.0	A	4
SBT	1 T	0.36	18.9	A	44	0.50	24.2	A	67
SBR	1 R	0.11	6.4	A	8	0.74	18.0	C	74
Overall		0.55	15.3	А	-	0.66	19.4	В	-
		Marc	h Road/Carlir	ng Avenue - A	ctuated-Coo	rdinated Sign	al		
EBL/T	1 T/L	0.45	54.0	A	34	0.15	39.9	А	17
EBR	1 R	0.03	0.2	А	0	0.08	0.4	А	0
WBL/T	1 T/L	0.26	47.8	А	21	0.59	54.5	А	54
WBR	1 R	0.51	12.0	А	22	0.80	38.5	С	76
NBL	1 L	0.52	65.1	А	43	0.30	63.7	А	22
NBT	3 T	0.84	25.6	D	#279.5	0.72	25.0	С	192
NBR	1 R	0.10	3.8	А	10	0.04	0.1	А	0
SBL	2 L	0.68	39.3	В	m43.9	0.66	52.7	В	m57.4
SBT	2 T	0.81	39.0	D	m141.6	1.04	54.4	F	#461.3
SBR	1 R	0.14	13.6	A	m9.7	0.05	0.9	A	2
Overall		0.80	31.3	C	-	1.00	40.2	E	-
m: volume for the	95 th percer	tile queue is r	netered by ar	upstream sid	Inal	*			r
#: volume for the	95 th percent	ile cycle exce	eds capacity		•				

Table 7: Study Area Intersection Operations - 2026 Background Conditions

Total Projected Conditions

The following section summarizes the intersection capacity analysis of total projected volume scenarios for the 2021 and 2026 horizon years. Total projected volumes depicted in **Figure 10** and **Figure 11** were derived by superimposing site-generated traffic volumes onto projected background traffic volumes (e.g. summing volumes together from **Figure 7** and **Figure 8**, resulting in **Figure 10**).



Figure 10: Total Project Traffic Volumes 2021



Figure 11: Total Projected Traffic Volumes 2026

Using the intersection capacity analysis software Synchro (v9), study area intersections were assessed in terms of vehicle delay, 95th percentile queues, a volume-to-capacity ratio (v/c) and a corresponding Level of Service (LOS). It should be noted that the overall performance of a *signalized* intersection is calculated as a weighted v/c ratio and assigned a corresponding LOS, with critical movements assigned a LOS based on their respective v/c ratio. The overall performance of an *unsignalized* intersection is a LOS output from Synchro, which is based on an Intersection Capacity Utilization (ICU) method, and critical movements are assigned a LOS based on delay.



Total Projected Conditions

The following **Table 8** and **Table 9** summarize the analysis of total projected volume scenarios for the 2021 and 2026 horizon years, respectively. The objective of this analysis is to determine if network improvements are, or will be required to support background traffic growth and the projected trips generated by the subject development. Detailed Synchro output data for total projected conditions (including total projected conditions "with improvements") is provided as **Appendix E**.

Assuming no signal timing plan or network modifications, **Table 9** depicts how an increase in background and sitegenerated traffic volumes is projected to result in movements operating at or above capacity, long queues and long delay. In order to mitigate the negative impacts of increased background traffic growth, the following network modifications would be required to support the projected increase in background traffic growth and the projected trips generated by the subject development for the 2021 horizon year:

March Road & Terry Fox Drive

- + Convert 1 southbound through lane to an exclusive southbound left-turn lane
- + Increase signal cycle length to 130 seconds and optimize phasing

March Road & Solandt Road

- + Add an additional southbound through lane
- + Add an additional northbound through lane
- + Implement dual southbound left-turn lane
- + Implement dual northbound left-turn lane
- + Increase signal cycle length to 130 seconds and optimize phasing

March Road & Carling Avenue

- + Add an additional northbound through lane
- + Increase signal cycle length to 130 seconds and optimize phasing

Solandt Road & Legget Drive

- + Add an additional southbound right with 40 m of storage
- + Optimize signal phasing

It should be noted that the above network modifications will be required to support both site-generated traffic and projected increases in background traffic growth (i.e. these recommendations are not in addition to the recommendations provided for background conditions).

Assuming optimized signal timing plans and the above network modifications, **Table 9** depicts how an increase in background and site-generated traffic volumes is again projected to result in movements operating at or above capacity, long queues and long delays at study area intersections during peak hours. In order to mitigate the negative impacts of projected site-generated traffic and an increase in background traffic growth, the following network modifications would be required, in addition above mentioned required network modifications, to support the projected trips generated by the subject development for the 2026 horizon year:

March Road & Terry Fox Drive

- + Add an additional southbound through lane
- + Optimize signal phasing

March Road & Carling Avenue

- + Add an additional southbound through lane
- Optimize signal phasing


			AM Pea	ak Hour		PM Peak Hour					
Movement	Lanes	v/c	Delay (s)	LOS	Queue (m)	v/c	Delay (s)	LOS	Queue (m)		
		Marc	h Road/Terry	Fox Drive - A	Actuated-Coo	rdinated Sign	al				
EBL	2 L	0.39	59.9	А	25	0.71	60.9	С	51		
EBT	2 T	0.68	48.0	В	89	0.19	33.4	А	24		
EBR	1 R	0.52	7.2	А	23	0.72	18.1	С	63		
WBL	WBL 2 L 0.27 58.1 A		А	18	0.55	55.5	А	39			
WBT	2 T	0.19	39.1	А	24	0.48	38.8	А	57		
WBR	1 R	0.13	0.6	А	0	0.67	16.0	В	53		
NBL	2 L	0.62	58.8	В	58	0.75	58.6	С	m42.7		
NBT	3 T	0.35	40.2	А	56	0.86	25.4	D	m#194.0		
NBR	1 R	0.30	13.8	А	33	0.17	1.7	А	m2.8		
SBL	1 L	1.01	98.1	F	#209.3	0.42	55.4	А	34		
SBT	3 T	0.69	35.5	В	148	0.42	32.9	А	66		
SBR	1 R	0.26	5.2	А	17	0.22	3.6	Α	9		
Overall		0.63	41.6	В	-	0.82	31.6	D	-		
		Mar	ch Road/Sola	ndt Road - A	ctuated-Coor	dinated Signa	al		1		
EBL	1 L	0.28	64.3	А	19	0.48	57.2	А	38		
EBT	1 T	0.44	54.1	А	45	0.18	44.6	А	19		
EBR	1 R	0.09	0.1	А	0	0.46	1.0	А	0		
WBL	2 L	0.35	62.5	А	19	1.13	117.9	F	#154.5		
WBT/R	1 T/R	0.57	53.3	А	61	0.77	39.5	С	76		
NBL	1 L	0.98	33.6	E	m#160.7	0.48	18.5	A	m10.1		
NBT	2 T	0.40	2.8	A	m17.6	0.97	23.2	F	#346.0		
NBR	1 R	0.69	7.4	B	m14.4	0.11	0.3	Δ	m0.0		
SBI	11	1 02	97.4	F	m#93.0	0.80	99.1	C C	m#34 3		
SBT	2 T	1 39	208.1	F	#322.0	0.20	26.7	B	#163.5		
SBR	1 R	0.25	4 5	А	m6 1	0.10	4.2	Δ	m8 3		
Overall	IN	1 21	80.5	F	-	1.00	36.8	F	-		
Overuit		Le	gget Drive/So	olandt Road -	Semi Act-Un	coord Signal	30.0	-			
EBL	1 L	0.68	16.4	В	77	0.48	46.0	Α	27		
EBT/R	1 T/R	0.60	11.4	А	70	0.24	13.7	А	19		
WBL	, 1 L	0.01	7.3	А	1	0.19	31.9	А	20		
WBT/R	1 T/R	0.05	6.0	A	6	0.71	44.1	C	91		
NBL	, 1 L	0.35	21.0	А	27	0.73	33.9	С	84		
NBT/R	1 T/R	0.45	18.8	А	51	0.10	7.0	Α	18		
SBL	1 L	0.18	18.2	А	15	0.01	22.3	Α	4		
SBT/R	1 T/R	0.46	18.9	А	52	1.03	70.5	F	#277.6		
Overall	,	0.55	15.8	А	-	0.87	48.9	D	-		
		Marc	h Road/Carlin	ng Avenue - A	Actuated-Coo	rdinated Sign	al				
EBT	1 T/L	0.47	55.8	A	35	0.16	38.0	А	17		
EBR	, 1 R	0.03	0.2	А	0	0.09	0.5	А	0		
WBL/T	1 T/L	0.27	49.0	А	22	0.60	52.6	Α	49		
WBR	, 1 R	0.52	10.1	А	19	0.77	30.7	С	63		
NBL	1L	0.48	61.9	A	41	0.23	53.9	A	19		
NBT	2 T	1.14	93.9	F	#478.4	0.91	34.4	E	#286.8		
NBR	 1 R	0.10	3,6	A	9	0.04	0,1	A	0		
SBI	21	0.68	74 7	B	m26.4	0.65	50.7	B	m48 5		
SRT	2 T	0.63	12 9	R	m158 1	1 00	44 9	F	m#400.7		
SBR	1 R	0.05	29	Δ	m10.6	0.05	22	Δ	m1 /		
Overall	± N	1 04	59.0	F	-	0.96	30.8	F	-		
m: volume for the	95 th percen	tile queue is r	metered by ar	upstream sid	nal	0.50	33.0	-	1 -		

Table 8: Study Area Intersection Operations - 2021 Total Projected Conditions

#: volume for the 95th percentile cycle exceeds capacity



			AM Pea	ak Hour		PM Peak Hour					
Movement	Lanes	v/c	Delay (s)	LOS	Queue (m)	v/c	Delay (s)	LOS	Queue (m)		
	<u> </u>	Marc	h Road/Terry	Fox Drive - A	Actuated-Coo	rdinated Sigr	al	<u> </u>	-		
EBL	2 L	0.44	61.0	А	28	0.81	72.3	D	#67.5		
EBT	2 T	0.69	48.1	В	91	0.18	35.3	А	26		
EBR	1 R	0.53	7.1	А	23	0.79	29.2	С	93		
WBL	WBL 2 L 0.28 58.2		А	18	0.68	67.8	В	44			
WBT	2 T	0.20	39.1	А	25	0.51	43.4	А	65		
WBR	1 R	0.17	0.8	А	0	0.85	40.1	D	104		
NBL	2 L	0.62	51.7	В	59	0.69	58.1	В	m54.6		
NBT	3 T	0.40	41.2	А	84	0.91	53.8	E	m#220.4		
NBR	1 R	0.27	19.1	А	42	0.16	16.3	А	m20.2		
SBL	2 L	0.79	62.4	С	#88.4	0.45	65.6	А	24		
SBT	2 T	1.27	162.2	F	#402.0	0.72	42.7	С	139		
SBR	1 R	0.34	13.0	А	40	0.24	2.2	А	5		
Overall		1.05	83.3	F	-	0.88	47.6	D	-		
		Mar	ch Road/Sola	ndt Road - A	ctuated-Coor	dinated Signa	al				
EBL	1 L	0.35	70.8	А	19	0.50	63.0	А	41		
EBT	1 T	0.41	51.3	А	42	0.20	49.5	А	20		
EBR	1 R	0.09	0.1	А	0	0.48	1.1	А	0		
WBL	2 L	0.45	68.5	А	19	0.93	65.6	E	#142.3		
WBT/R	1 T/R	0.54	50.5	А	56	0.66	30.7	В	66		
NBL	, 2 L	0.82	49.7	D	m#116.4	0.44	54.7	А	m26.1		
NBT	3 T	0.41	25.6	Α	102	0.96	49.8	E	#328.1		
NBR	1 R	0.79	22.3	С	m171.7	0.12	6.7	А	m7.4		
SBL	2 L	0.60	48.2	A	m24.1	0.27	52.0	А	m9.3		
SBT	3 T	0.90	37.0	D	m105.7 0.59		48.0	A	#147.1		
SBR	1 R	0.19	8.3	A	m6.6	0.10	3.5	A	m1.9		
Overall		0.85	33.8	D	-	0.93	43.4	E	-		
		Le	gget Drive/So	olandt Road -	Semi Act-Un	coord Signal		<u> </u>			
EBL	1L	0.68	16.5	В	78	0.30	25.4	А	21		
EBT/R	1 T/R	0.60	11.6	A	71	0.20	10.4	A	17		
WBL	, 1 L	0.01	7.3	Α	1	0.15	21.3	А	17		
WBT/R	1 T/R	0.05	6.0	A	6	0.60	27.0	A	76		
NBL	1L	0.31	20.0	A	27	0.53	12.6	A	44		
NBT/R	1 T/R	0.47	19.3	A	54	0.14	7.6	A	18		
SBL	, 1 L	0.19	18.5	Α	16	0.02	20.1	А	4		
SBT	1 T	0.36	18.8	Α	44	0.54	25.8	А	68		
SBR	1 R	0.12	6.2	А	8	0.69	11.9	В	50		
Overall		0.55	15.4	А	-	0.63	17.4	В	-		
		Marc	h Road/Carlin	ng Avenue - A	Actuated-Coo	rdinated Sigr	al		•		
EBL/T	1 T/L	0.45	54.1	A	34	0.16	40.2	А	18		
EBR	1 R	0.03	0.2	А	0	0.08	0.4	А	0		
WBL/T	1 T/L	0.26	47.7	А	22	0.59	54.8	А	54		
WBR	1 R	0.62	28.1	А	40	0.81	39.1	D	77		
NBL	1 L	0.54	66.6	А	#52.6	0.29	63.2	А	21		
NBT	3 T	0.86	26.8	D	#291.5	0.73	25.3	С	195		
NBR	1 R	0.10	3.8	А	10	0.04	0.1	А	0		
SBL	2 L	0.67	59.1	В	m#58.0	0.66	57.1	В	m58.7		
SBT	2 T	0.81	22.8	D	#166.5	1.07	61.9	F	#470.6		
SBR	1 R	0.13	3.5	Α	m1.9	0.05	2.2	А	m1.9		
Overall	-	0.82	28.3	D	-	1.03	45.1	F	-		
m: volume for the	95 th percer	tile queue is i	metered by ar	upstream sig	gnal						
#: volume for the	95 th percent	ile cycle exce	eds capacity								

Table 9: Study Area Intersection Operations - 2026 Total Projected Conditions

With respect to the operations of the proposed development driveway connections, they are projected to operate with delays ranging between 30 to 40 seconds (i.e. LOS 'D' to LOS 'E') and queues no longer than 1-3 vehicles in length during peak hours, according to the intersection capacity analysis software Synchro. Based on field observations, notable delays can be expected when egressing the site because of existing westbound congestion on Solandt Road during the afternoon peak hour; however, depending on the rate of vehicles leaving the site (e.g. future employees all have very similar or very different workday end times) on-site queuing could be significantly longer than 1-3 vehicles in length.

Adjustments to Site-Generated Demand

Similar to background demand, adjustments to demand modal splits (e.g. increasing the project percentage of transit users) was not considered for the purpose of this assessment. As previously mentioned, it should be noted that once March Road is widened to accommodate a dedicated Bus Rapid Transit (BRT) facility, it is anticipated that the transit modal share for the TAZ will increase, with a proportional reduction in the auto modal share. However, with this anticipated shift in modal shares, study area intersections are projected to continue operating at capacity (i.e. the projected increases in person trips to/from/within the surrounding area will need to be accommodated by modes other than the private automobile, such as transit).

As demonstrated by the above analysis, there is a projected need for additional person trip capacity and given study area roadways are considered to be fairly well built-out, additional person capacity should be provided in the form of high-quality transit, pedestrian and cycling facilities, to reduce the reliance on the private automobile.

4. Step 4 – Analysis

With respect to the City of Ottawa Traffic Impact Assessment Guidelines, this section provides an assessment of how the proposed Site Plan and study area transportation network aligns with City of Ottawa's policies, By-Laws and planning objectives.

4.1 Development Design

Design for Sustainable Modes

Pedestrian Facilities: A continuous and depressed sidewalk will be provided across the proposed site driveway connections and a pathway will be provided along the main building frontage (i.e. the east building face), which will connect with the existing sidewalks along Solandt Road. Additionally, sidewalks and pavement markings (e.g. high-visibility pedestrian crosswalks) will be provided, connecting the subject site to existing adjacent land uses (i.e. 450 March Road).

Bicycle Facilities: Dedicated bike lanes are currently provided along both sides of March Road and Legget Drive (bike lanes on Legget Drive are provided between Terry Fox Drive and Solandt Road only). In accordance with Zoning By-Law requirements, the total amount of proposed on-site bike parking is 33 spaces, which will be provided in well-lit areas and close to the main building entrance.

Transit Facilities: Within the vicinity of the subject site, OC Transpo currently maintains 6 transit stops within walking distance. The following **Table 10** summarizes available OC Transpo routes and their associated stop numbers and location, and the direction of each route.



Stop #	Location	Operating Route	Walking distance from main entrance	Direction
7991	150m south of Legget Dr / Solandt Rd	63, 64	370 m	Outbound
7987	150m south of Legget Dr / Solandt Rd	63, 64	330 m	Inbound
6909	50m north of Legget Dr / Solandt Rd	63, 66, 166	280 m	Outbound
1898	55m north of March Rd / Solandt Rd	63, 266, 660, 674	170 m	Outbound
1172	80m west of March Rd / Solandt Rd	64, 166	220 m	Outbound
1894	90m south of March Rd / Solandt Rd	63, 64, 266, 660, 674	220 m	Inbound

Table 10: Existing Transit Facilities

It should be noted that all the transit stops listed in **Table 10** are located within the OC Transpo's service design guideline of 400 m. A review of Transportation Demand Management (TDM) strategies, which includes strategies to promote transit use, is provided as **Appendix F**.

Circulation and Access

The width of the proposed east site driveway connection to Solandt Road is 6.7m, which is sufficient for two-way traffic and is in accordance with Zoning By-Law requirements. This driveway will operate as a full-movement connection with a single inbound and a single outbound lane.

The proposed west site driveway to Solandt Road has been recommended to operate as an inbound, right-in only connection. This will be supported by a physical channelized right-turn that will feed an approximate 25m long One-Way drive-aisle. To encourage One-Way operations, appropriate signage (e.g. Do Not Enter, One-Way, etc.) and a physical curb bulb-out will be provided. Given this driveway connection will function as One-Way inbound only and has to be wide enough to serve as the site's primary fire route and entrance point for trucks, its width is proposed to be 6.7m at the road edge and then it will taper down to the minimum fire route width of 6m.

A single loading zone and garbage enclosure will be located at the rear/south side of the proposed building. A truck turning template analysis was undertaken for the site to ensure garbage/fire/delivery type vehicles will be able to circulate around the site effectively. Truck turning templates can be found in **Appendix G**.

Taxis, and other short-stay/delivery vehicles will be accommodated by an approximate 25m layby located along the main building frontage (i.e. the east building face).

Both proposed driveway connections, a clear throat length greater than 15m will be provided, which will satisfy City of Ottawa requirements and minimize the potential for on-site queuing spillback onto Solandt Road.

As depicted on the proposed Site Plan (i.e. **Figure 2**), a clear 6m wide fire route will be provided, which satisfies Building Code requirements.

New Street Networks

With respect to the City's TIA Guidelines, this module is exempt.



4.2 Parking

Parking Supply

The proposed development is located in Area C, identified in Schedule 1A of the City's Zoning By-law. The following **Table 11** summarizes the required minimum parking space rate, in accordance with the City's Zoning By-law, section 101, Table 101 and 111A.

Table	11:	Parking	Supply
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Mode	Zoning Requirement	GFA	Minimum parking Requirement	Parking Provided
Auto	2.4 per 100 m ² GFA	$0.000 m^{2}$	198	350
Bike	1 per 250 m ² of GFA	0,230 M²	33	33

As shown in Table 11, the amount of provided auto and bike parking with satisfy Zoning By-law requirements.

Spillover parking

With respect to the City's TIA Guidelines, this module is exempt.

4.3 Boundary Street Design

The identified boundary streets for the subject site are March Road and Solandt Road, which are both owned and maintained by the City of Ottawa. The subject site is designated as Urban Employment Area under the City of Ottawa Official Plan – Schedule B and no new roads are planned to support the proposed development.

Mobility

A Multi-Modal Level of Service (MMLOS) assessment was conducted for the subject site's boundary streets. With respect to the City of Ottawa's MMLOS guidelines, target MMLOS values were obtained from Exhibit 22 of the MMLOS guidelines, and the resulting MMLOS assessment is discussed below and the detailed assessment is included as **Appendix H**.

Segment MMLOS Summary

March Road is classified as an Arterial Road and it is a designated truck route in Ottawa. Solandt Road is classified as a collector road and is not classified as a truck route. Both roads have transit facilities operating in a mixed traffic condition. However, it should be noted that the City of Ottawa 2031 Affordable Network Plan identifies a segment of March Road between Solandt Road and Carling Avenue to include an at-grade BRT (the proposed Kanata North Transitway). Given this dedicated transit priority corridor is planned to be completed beyond the projected build-out of the proposed development, service changes remain unknown at this time. As such, the effect of the planned BRT along March Road will not be considered as part of this report.

The following Table 12 is a MMLOS summary for all modes along the road segments described above.

Pood Namo	Sogmont Botwoon	PLOS		BL	OS	TL	.OS	TkLOS		
Noau Name	Segment Detween	Curr	Target	Curr	Target	Curr	Target	Curr	Target	
March Rd	Terry Fox & Solandt	F	С	Е	С	D	С	А	В	
March Rd	Solandt & Carling	F	С	Е	С	D	С	А	В	
Solandt Rd	March & Legget	С	С	Е	С	D	С	А	D	

Table 12: Segment MMLOS



Based on the foregoing, the following should be considered:

Pedestrian LOS

- + Only Solandt Road between March Road and Legget Road meets PLOS targets.
- + Failing PLOS on segments is mainly attributed to high operating speeds and high curb lane traffic volumes.
- To achieve Pedestrian LOS targets, significant modification to the road geometry, and shifts in travel modes will be required. Given local area context, this is likely not achievable; however, an increase in the buffer distance between sidewalks and the road can help improve pedestrian comfort.

Bike LOS

- + Boundary street segments do not meet BLOS targets.
- + To meet targets, segregated bike lanes would be needed on March Road and painted or segregated bike lanes would be needed on Solandt Road.

Transit LOS

- + Boundary street segments do not meet TLOS targets.
- + To meet targets, exclusive transit lanes would be required.

Truck LOS

+ Boundary street segments satisfy TkLOS targets.

Road Safety

Based on a review of the most recent 5 years of historical collision data (collected from January 1st 2014 to December 31st in 2018), **Table 13** and **Table 14** summarize the number and rate (i.e. collisions per million entering vehicles or collisions per million vehicle kilometers) of collisions within the vicinity of the subject site.

Table 13: Intersection Collision Data

	Total	Pato	Classification						
Intersection	Collisions	(Collisions/MEV)	Property Damage	Fatal injury	Non-fatal injury				
Carling/March	52	0.69	49	1	2				
Legget/Solandt	4	0.16	4	0	0				
March/Solandt	56	0.73	48	0	8				
March/Terry Fox	59	0.79	45	0	14				
Total	171	-	146	1	24				

Table 14:	Segment	Collision	Data
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		Total	Pata	Classification						
Segment	Between	Collisions	(Collisions/MVK)	Property Damage	Fatal injury	Non-fatal injury				
March Road	Solandt & Station	25	1.16	23	0	2				
March Road	Solandt & Terry Fox	16	0.70	10	0	6				
Solandt Road	March & Legget	1	0.72	1	0	0				
	Total	42	-	34	0	8				



As shown in **Table 13**, a total of 171 collisions have occurred at study area intersections, most-of-which resulted in property damage only; however, it should be noted that a fatal collision was reported at the intersection of Carling/March and a total of 24 non-fatal injuries were also reported. The historical rate of collisions at study area intersections are all below 0.79 collisions/MEV.

As shown in **Table 14**, a total of 42 collisions have occurred on road segments between study area intersections, most-of-which resulted in property damage only. The historical rate of collisions along road segments between study area intersections are all below 1.16 collisions/MVK.

Reviewing the number of collisions per year, the following **Figure 13** and **Figure 14** depict the frequency of collisions at study area intersection and along road segments between study area intersections, respectively.



Figure 12: Intersection Collision Frequency



Figure 13: Segment Collision Frequency

As shown in **Figure 13** and **Figure 14**, there appears to be an overall downward trend in the frequency of collisions at study area intersection and along road segments between study area intersections.

In addition to the foregoing, a detailed review of historical collision revealed the following:

- + The highest collision type was rear end collisions, accounting for 56% of the total collisions.
- + The predominant collision types are generally declining in frequency.
- + Most collisions occurred on a clear day, with dry surface conditions.
- No Head-on collisions occurred within the study area.

A detailed collision analysis for both intersections and segments is included as Appendix I.

Neighbourhood Traffic Management (NTM)

With respect to the City's TIA Guidelines, this module is exempt.

4.4 Access Intersection Design

Location and Design of Access

As depicted in **Figure 2**, the proposed west driveway connection to Solandt Road will be approximately 85m east of the March/Solandt intersection (measured centerline-to-centerline) and the proposed east driveway connection will be approximately 50m east of the west driveway connection (measured centerline-to-centerline) and both driveway connections will be approximately 6.7m wide at the street edge. With respect to the City's Private Approach By-Law No. 2003-447 and considering the west driveway connection will function as One-Way inbound only, both driveway connections satisfy By-Law requirements in terms of number of driveways along the site's frontage, width and location.



Intersection Control

Based on projected operations of the proposed driveway connections to Solandt Road, and their proximity to adjacent signalized intersections, STOP control on the minor approach will be sufficient for the east driveway connection and YIELD control for inbound traffic at the proposed west driveway connection is recommended to facilitate a pedestrian crosswalk. Based on projected operations and turning movement volumes at the proposed driveway connections to Solandt Road, additional auxiliary turn lanes are not recommended.

Intersection Design

With respect to the City's TIA Guidelines, this module requires a complete intersection MMLOS analysis for existing, future background and future total travel demands by all modes and a complete detailed performance analysis at study area intersections for the same existing, future background and future total travel demands.

Given a MMLOS analysis for pedestrian, bike, transit and truck modes are not impacted by volume, no further analysis is required.

With regard to a complete detailed performance analysis at study area intersections for the existing, future background and future total travel demands, this was completed as part of Step 3, compete with recommended network modifications that would be required to achieve an acceptable LOS.

4.5 Transportation Demand Management

With respect to the City's TIA Guidelines, an analysis of Transportation Demand Management (TDM) measures is required when a proposed development is projected to have more than 60 employees on-site at any given time. As such, a formal TDM Checklists (provided by the City) was followed to determine if TDM measures could be implemented, based on available information. The TDM checklist is attached as **Appendix F**.

Although it is anticipated that the proponent will maintain the ownership of the property, future tenants will determine what TDM measures can be implemented. Therefore, it is recommended that the TDM measures checklist be discussed with future tenant(s).

4.6 Neighbourhood Traffic Management

Given projected traffic volume on Solandt Road currently and is anticipated to continue to exceed the collector classification threshold (i.e. 300 veh/h during peak hours), the City's TIA Guidelines requires a review of potential neighbourhood traffic management strategies.

Based on the local context of the surrounding area (e.g. predominantly high-density office type land uses), Solandt Road will require higher quality transit and cycling facilities to ultimately reduce the amount of volume it currently and is projected to carry.

4.7 Transit

The transit routes that serve the subject site were previously summarized in **Table 10** and detailed transit maps included in **Appendix J**. It should be noted that Routes 63 and 64 run on different roads during AM and PM peaks, Route 660 and 674 are special school routes, Route 660 only has 1 scheduled run during the AM peak and none during the PM peak, and Route 166 only has 1 scheduled run during the AM peak and none during the PM peak.

Based on the foregoing, it is anticipated that Routes 63 and 64 are anticipated to be used by most transit users generated by the subject development.



Route Capacity

Current transit ridership data for the bus stops listed in **Table 10** was provided by the City and is included as **Appendix K**. Given Routes 63 and 64 are serviced by single 40ft buses (which have a person capacity of approximately 50 passengers) and there are currently approximately 30 passengers per bus that arrive/depart bus stops within the vicinity of the subject, there is an approximate residual capacity for 20 additional passengers per bus. As the proposed development is projected to generate approximately 20 transit passenger trips during peak hours, the current residual bus capacity can therefore, easily accommodate the new projected transit trips generated by the subject site.

Transit Priority

As mentioned previously, there are future plans to implement BRT within the March Road corridor. This further increase area transit capacity, frequency and reliability, which will be critical in reducing the reliance on the private automobile for the surrounding area.

4.8 Review of Network Concept

With respect to the City's TIA Guidelines, this module is exempt.

4.9 Intersection Design

Intersection Control

All study area intersections are currently traffic signal controlled and are more or less fully built-out. Based on the City's policies, goals and objectives, additional road widenings or intersection control is not recommended.

Intersection Design

Similar to the MMLOS analysis conducted for the Boundary Street Design, the following **Table 15** is a MMLOS summary for all modes at study area intersections, and the detailed Intersection MMLOS analysis is provided in **Appendix L**.

Intersection	PL	OS	BL	OS	TL	OS	Tkl	OS	AutoLOS		
Intersection	Curr	Target	Curr	Target	Curr	Target	Curr	Target	Curr	Target	
March/Terry Fox	F	С	F	С	F	С	А	В	В	D	
March/Solandt	F	С	F	С	F	С	А	В	Е	D	
Solandt/Legget	F	С	F	С	F	С	С	D	С	D	
March/Carling	F	С	F	С	F	С	С	В	E	D	

Table 15: Intersection MMLOS

As shown in **Table 15**, study area intersections do not meet LOS targets for pedestrians, cycling and transit modes. The calculated Truck LOS exceeds LOS targets, with exception of the March/Carling intersection. The calculated Auto LOS exceeds LOS targets for the March/Terry Fox and Solandt/Legget intersections and does not meet LOS targets for the March/Carling intersections.

Based on the foregoing, the following should be considered at study area intersections:

Pedestrian LOS

- + Beneficial pedestrian safety features that are currently provided include protected only left-turn phasing, crosswalks and streetlighting.
- + Failing PLOS is mainly attributed to the size of study area intersections.
- + Possible measures to improve PLOS
 - Pedestrian leading crosswalk intervals
 - o "Zebra" pavement markings on crosswalks
 - o Convert channelized right-turns to smart channels
 - Provide median pedestrian refuges.

Bicycle LOS

- Failing BLOS is mainly attributed to the number of lanes that are required to cross to perform a left-turn, high road operating speeds and long auxiliary right-turns lanes that require traffic to cross bike lanes.
- Possible measures to improve BLOS
 - Two stage left-turn bike box
 - o Pocket bike lane on east/west approaches
 - Reduce auxiliary vehicular right-turn storage to no more than 50m.

Transit LOS

- + Failing TLOS is mainly attributed to vehicle movements experiencing long delays, which impact bus travel time/reliability.
- + Possibility measures to improve TLOS
 - Transit priority signaling (e.g. advanced "cigar" phase to allow a queue jump)
 - Transit priority lanes (e.g. the planned BRT with significantly improve TLOS)

With respect to the future scenarios and the Auto LOS, conceptual road modifications were presented in the previous Step 3 - Forecasting section of this report; however, based on the City's policies, goals and objectives, additional road widenings or intersection control is not recommended.

5. Findings and Recommendations

With respect to the City's Transportation Impact Assessment Guidelines, the following findings and conclusions are offered.

Deficiencies in study area road network capacity - it should be noted that once March Road is widened to accommodate a dedicated Bus Rapid Transit (BRT) facility, it is anticipated that the transit modal share for the surrounding area will increase, with a proportional reduction in the auto modal share. However, with this anticipated shift in modal shares, study area intersections are projected to continue operating at capacity (i.e. the projected increases in person trips to/from/within the surrounding area will need to be accommodated by modes other than the private automobile, such as transit).

Measures to improve pedestrian and cycling facilities - there are a number of potential measures that can be implemented to improve the level of comfort for pedestrians and cyclists; however, due to the size of study area intersections, PLOS and BLOS targets cannot be met in the context of the surround study area.



The proposed development fits well into the context of the surrounding area and it is projected to have a minimal impact on the surrounding transportation network. The design and location of the proposed development serves the City of Ottawa's polices, goals and objectives by providing facilities and connectivity to help promote active and transit modes.

Based on the foregoing, the proposed development located at 3026 Solandt Road is recommended from a transportation perspective.



Appendix A – Traffic Volume Data























37663

Turning Movement Count - Full Study Summary Report

MARCH RD @ TERRY FOX DR

Survey D	Irvey Date: Wednesday, April 11, 2018								Total Observed U-Turns										AADT Factor		
								Northbo	und:	229	Sout	thbound:	: 16				.90				
								Eastbou	und:	0	Wes	stbound:	3								
								F	- ull S	tudy											
			I	MARC	H RD							TE	RRY I	OX D	R						
-		Northb	ound		;	Southb	ound				Eastb	ound			Westb	ound					
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	Grano Tota		
07:00 08:00	135	301	99	535	182	1128	111	1421	1956	49	304	229	582	55	74	20	149	731	2687		
08:00 09:00	229	359	167	755	328	966	135	1429	2184	84	480	266	830	55	113	38	206	1036	3220		
09:00 10:00	243	357	139	739	192	836	154	1182	1921	83	412	165	660	65	128	35	228	888	2809		
11:30 12:30	133	676	123	932	104	593	120	817	1749	143	119	172	434	150	222	170	542	976	2725		
12:30 13:30	114	653	106	873	144	625	146	915	1788	134	216	156	506	122	152	99	373	879	2667		
15:00 16:00	192	1076	96	1364	51	463	110	624	1988	183	92	153	428	96	213	166	475	903	2891		
16:00 17:00	245	1242	105	1592	36	510	125	671	2263	187	126	291	604	132	327	272	731	1335	3598		
17:00 18:00	220	1283	92	1595	59	541	112	712	2307	229	155	406	790	215	365	325	905	1695	4002		
Sub Total	1511	5947	927	8385	1096	5662	1013	7771	16156	1092	1904	1838	4834	890	1594	1125	3609	8443	24599		
U Turns				229				16	245				0				3	3	248		
Total	1511	5947	927	8614	1096	5662	1013	7787	16401	1092	1904	1838	4834	890	1594	1125	3612	8446	24847		
EQ 12Hr	2100	8266	1289	11973	1523	7870	1408	10824	22797	1518	2647	2555	6719	1237	2216	1564	5021	11740	34537		
Note: These	values a	are calcu	lated b	y multip	lying the	e totals b	by the a	ppropria	te expar	nsion fac	tor.			1.39							
AVG 12Hr	1890	7440	1160	10776	1371	7083	1267	9742	20518	1366	2382	2299	6047	1113	1994	1407	4519	10566	31084		
Note: These	volumes	are cal	culated	by mult	iplying t	he Equi	valent 1	2 hr. tota	als by th	e AADT	factor.			.90							
AVG 24Hr	2476	9746	1519	14117	1796	9279	1660	12761	26878	1790	3120	3012	7922	1459	2612	1844	5919	13841	40719		
Note: These	volumes	are cal	culated	by mult	iplying t	he Aver	age Da	ily 12 hr.	totals b	y 12 to 2	24 expar	sion fac	tor.	1.31							

Comments:

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



Transportation Services - Traffic Services Turning Movement Count - Full Study Diagram

MARCH RD @ TERRY FOX DR





Turning Movement Count - 15 Minute Summary Report

MARCH RD @ TERRY FOX DR

Sur	vey Da	Date: Wednesday, April 11, 201							Total Observed U-Turns											
									No	orthbour	nd: 2	29	So	uthboun	d: 1	6				
									E	astboun	d: 0		We	estboun	d: 3					
				MA	RCH	RD						Т	ERR	(FOX	DR					
		N	orthbou	und	N	So	uthbour	nd	6	отр	Eas	tbound		E	Wes	stbound	I	\A/	етр	Crond
Time F	Period	LT	ST	RT	TOT	LT	ST	RT	тот	TOT	LT	ST	RT	тот	LT	ST	RT	тот	TOT	Total
07:00	07:15	25	58	21	106	26	282	20	328	434	7	42	54	103	11	11	4	26	129	563
07:15	07:30	30	83	21	138	34	274	23	332	470	12	74	62	148	14	16	7	37	185	655
07:30	07:45	33	89	25	151	52	313	28	393	544	10	74	55	139	16	20	7	43	182	726
07:45	08:00	47	71	32	153	70	259	40	370	523	20	114	58	192	14	27	2	44	236	759
08:00	08:15	55	72	46	179	84	259	41	384	563	11	92	68	171	11	24	8	43	214	777
08:15	08:30	54	95	46	200	80	237	22	339	539	26	130	75	231	15	24	15	54	285	824
08:30	08:45	56	96	31	187	86	249	30	365	552	21	124	60	205	13	26	5	44	249	801
08:45	09:00	64	96	44	212	78	221	42	341	553	26	134	63	223	16	39	10	65	288	841
09:00	09:15	72	78	48	209	80	262	51	393	602	16	123	46	185	25	44	10	79	264	866
09:15	09:30	65	90	37	202	56	233	42	333	535	25	135	39	199	13	40	8	61	260	795
09:30	09:45	69	99	27	205	31	183	37	252	457	19	100	45	164	19	27	8	54	218	675
09:45	10:00	37	90	27	158	25	158	24	207	365	23	54	35	112	8	17	9	34	146	511
11:30	11:45	19	149	25	200	26	130	29	185	385	28	19	41	88	31	51	31	113	201	586
11:45	12:00	35	147	34	226	22	163	26	212	438	36	32	45	113	36	59	53	148	261	699
12:00	12:15	41	202	34	290	24	165	29	220	510	44	32	40	116	43	71	41	155	271	781
12:15	12:30	38	178	30	254	32	135	36	205	459	35	36	46	117	40	41	45	126	243	702
12:30	12:45	22	191	21	237	51	176	37	264	501	30	33	39	102	24	35	42	101	203	704
12:45	13:00	39	153	28	227	43	153	43	239	466	43	65	46	154	38	43	27	108	262	728
13:00	13:15	26	175	26	230	31	166	31	229	459	30	63	34	127	32	42	19	93	220	679
13:15	13:30	27	134	31	193	19	130	35	185	378	31	55	37	123	28	32	11	71	194	572
15:00	15:15	49	230	21	305	18	121	27	166	471	45	22	45	112	27	40	22	89	201	672
15:15	15:30	28	238	27	299	11	101	16	128	427	51	18	31	100	27	42	36	106	206	633
15:30	15:45	55	303	21	387	10	120	28	158	545	41	26	34	101	16	66	50	132	233	778
15:45	16:00	60	305	27	399	12	121	39	173	572	46	26	43	115	26	65	58	149	264	836
16:00	16:15	72	285	31	406	14	130	33	179	585	45	34	68	147	30	89	74	193	340	925
16:15	16:30	56	336	23	421	5	131	30	166	587	47	37	65	149	37	51	76	164	313	900
16:30	16:45	56	272	19	352	9	117	36	162	514	52	30	77	159	38	101	59	198	357	871
16:45	17:00	61	349	32	449	8	132	26	166	615	43	25	81	149	27	86	63	176	325	940
17:00	17:15	60	302	29	405	12	145	26	183	588	68	56	111	235	60	127	92	279	514	1102
17:15	17:30	69	373	22	477	16	126	21	164	641	56	36	107	199	65	70	84	219	418	1059
17:30	17:45	48	298	24	381	16	124	33	173	554	66	32	103	201	50	81	80	211	412	966
17:45	18:00	43	310	17	376	15	146	32	193	569	39	31	85	155	40	87	69	197	352	921
TOTAL	.: 1	511	5947	927	8614	1096	5662	1013	7787	16401	1092	1904	1838	4834	890	1594	112	25 36 1	2 8446	24847
Note: L	J-Turns	are i	nclude	ed in T	otals.					(Comme	nt:								

Note: U-Turns are included in Totals.



Turning Movement Count - Cyclist Volume Report

Work Order

37663

MARCH RD @ TERRY FOX DR

Count Date: Wednesday, April 11, 2018

Start Time: 07:00

		MARCH RD					
Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 08:00	0	2	2	4	3	7	9
08:00 09:00	0	1	1	2	1	3	4
09:00 10:00	0	0	0	2	1	3	3
11:30 12:30	0	0	0	1	10	11	11
12:30 13:30	1	0	1	4	0	4	5
15:00 16:00	0	0	0	0	1	1	1
16:00 17:00	1	1	2	1	4	5	7
17:00 18:00	1	0	1	1	3	4	5
Total	3	4	7	15	23	38	45

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.



Turning Movement Count - Heavy Vehicle Report

MARCH RD @ TERRY FOX DR

Survey Date: Wednesday, April 11, 2018

			Μ	IARC	H RD							TE	RRY I	FOX D	R					
		North	ound		:	Southb	ound				Eastbo	ound		,	Westbo	ound				
Time	Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	4	9	1	14	1	9	5	15	29	3	2	7	12	7	5	0	12	24	53
08:00	09:00	5	22	2	29	0	18	5	23	52	2	2	4	8	4	4	1	9	17	69
09:00	10:00	3	21	1	25	1	17	6	24	49	2	2	0	4	1	7	1	9	13	62
11:30	12:30	2	13	1	16	0	16	2	18	34	4	4	1	9	2	4	2	8	17	51
12:30	13:30	2	15	5	22	1	13	2	16	38	0	5	3	8	3	6	3	12	20	58
15:00	16:00	4	17	3	24	0	18	0	18	42	6	4	4	14	3	9	0	12	26	68
16:00	17:00	6	10	2	18	1	16	2	19	37	2	3	3	8	1	0	1	2	10	47
17:00	18:00	8	7	0	15	1	4	0	5	20	0	5	1	6	0	0	0	0	6	26
Sub	Total	34	114	15	163	5	111	22	138	301	19	27	23	69	21	35	8	64	133	434
U-Tur	ns (Heav	vy Vel	nicles)		0				0	0				0				0	0	0
Тс	otal	34	114	15	0	5	111	22	138	301	19	27	23	69	21	35	8	64	133	434



Work Order

37663

Turning Movement Count - Pedestrian Volume Report

MARCH RD @ TERRY FOX DR

Count Dat	e: Wednesday,	April 11, 2018				Start Time:	07:00
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	4	0	4	0	1	1	5
07:15 07:30	0	2	2	0	0	0	2
07:30 07:45	3	1	4	4	3	7	11
07:45 08:00	2	1	3	3	2	5	8
07:00 08:00	9	4	13	7	6	13	26
08:00 08:15	3	0	3	1	1	2	5
08:15 08:30	6	1	7	6	2	8	15
08:30 08:45	6	3	9	5	1	6	15
08:45 09:00	10	1	11	4	2	6	17
08:00 09:00	25	5	30	16	6	22	52
09:00 09:15	7	4	11	6	8	14	25
09:15 09:30	5	0	5	5	5	10	15
09:30 09:45	1	0	1	1	1	2	3
09:45 10:00	2	0	2	0	1	1	3
09:00 10:00	15	4	19	12	15	27	46
11:30 11:45	2	1	3	2	7	9	12
11:45 12:00	14	9	23	9	10	19	42
12:00 12:15	5	7	12	6	2	8	20
12:15 12:30	10	16	26	16	8	24	50
11:30 12:30	31	33	64	33	27	60	124
12:30 12:45	7	2	9	0	10	10	19
12:45 13:00	7	7	14	7	6	13	27
13:00 13:15	11	16	27	14	9	23	50
13:15 13:30	7	7	14	7	7	14	28
12:30 13:30	32	32	64	28	32	60	124
15:00 15:15	0	4	4	1	0	1	5
15:15 15:30	1	0	1	1	0	1	2
15:30 15:45	1	3	4	0	1	1	5
15:45 16:00	1	3	4	1	3	4	8
15:00 16:00	3	10	13	3	4	7	20
16:00 16:15	4	1	5	0	6	6	11
16:15 16:30	0	11	11	2	1	3	14
16:30 16:45	2	14	16	1	4	5	21
16:45 17:00	5	5	10	2	6	8	18
16:00 17:00	11	31	42	5	17	22	64
17:00 17:15	12	9	21	8	8	16	37
17:15 17:30	5	9	14	6	4	10	24
17:30 17:45	4	7	11	3	1	4	15
17:45 18:00	2	7	9	2	3	5	14
17:00 18:00	23	32	55	19	16	35	90
Total	149	151	300	123	123	246	546

Comment:



Work Order 37663

Turning Movement Count - 15 Min U-Turn Total Report

MARCH RD @ TERRY FOX DR

Survey Date: We		ednesday, April 1 ⁻	1, 2018			
Time Pe	riod	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	2	0	0	0	2
07:15	07:30	4	1	0	0	5
07:30	07:45	4	0	0	0	4
07:45	08:00	3	1	0	1	5
08:00	08:15	6	0	0	0	6
08:15	08:30	5	0	0	0	5
08:30	08:45	4	0	0	0	4
08:45	09:00	8	0	0	0	8
09:00	09:15	11	0	0	0	11
09:15	09:30	10	2	0	0	12
09:30	09:45	10	1	0	0	11
09:45	10:00	4	0	0	0	4
11:30	11:45	7	0	0	0	7
11:45	12:00	10	1	0	0	11
12:00	12:15	13	2	0	0	15
12:15	12:30	8	2	0	0	10
12:30	12:45	3	0	0	0	3
12:45	13:00	7	0	0	0	7
13:00	13:15	3	1	0	0	4
13:15	13:30	1	1	0	0	2
15:00	15:15	5	0	0	0	5
15:15	15:30	6	0	0	1	7
15:30	15:45	8	0	0	0	8
15:45	16:00	7	1	0	0	8
16:00	16:15	18	2	0	0	20
16:15	16:30	6	0	0	0	6
16:30	16:45	5	0	0	0	5
16:45	17:00	7	0	0	0	7
17:00	17:15	14	0	0	0	14
17:15	17:30	13	1	0	0	14
17:30	17:45	11	0	0	0	11
17:45	18:00	6	0	0	1	7
Tota	1	229	16	0	3	248



Turning Movement Count - Full Study Peak Hour Diagram MARCH RD @ SOLANDT RD





Turning Movement Count - Full Study Peak Hour Diagram MARCH RD @ SOLANDT RD





Turning Movement Count - Full Study Peak Hour Diagram MARCH RD @ SOLANDT RD





Turning Movement Count - Full Study Peak Hour Diagram MARCH RD @ SOLANDT RD





Transportation Services - Traffic Services Turning Movement Count - Full Study Diagram

MARCH RD @ SOLANDT RD





36153

Turning Movement Count - Full Study Summary Report

MARCH RD @ SOLANDT RD

Survey D	Survey Date: Wednesday, August 10, 2016						Total Observed U-Turns										AADT Factor		or
								Northbo	und: 3	34	Sout	thbound:	81				.90		
								Eastbou	und: ()	Wes	stbound:	0						
								F	Full St	udy									
				MARCI	H RD							S	OLAN	DT RE	C				
-		Northb	ound			Southb	ound				Eastb	ound			Westb	ound			
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	Grano Tota
07:00 08:00	301	467	367	1135	65	1214	103	1382	2517	8	29	65	102	56	17	10	83	185	2702
08:00 09:00	560	685	645	1890	99	1147	125	1371	3261	27	93	132	252	45	91	29	165	417	3678
09:00 10:00	472	736	518	1726	67	891	83	1041	2767	22	52	111	185	67	71	23	161	346	3113
11:30 12:30	178	824	118	1120	35	728	102	865	1985	109	46	257	412	199	51	87	337	749	2734
12:30 13:30	231	776	182	1189	75	771	149	995	2184	70	40	162	272	122	36	49	207	479	2663
15:00 16:00	104	1098	118	1320	13	698	48	759	2079	57	26	280	363	273	18	53	344	707	2786
16:00 17:00	145	1439	71	1655	21	779	79	879	2534	88	46	573	707	541	65	134	740	1447	3981
17:00 18:00	98	1512	46	1656	21	916	50	987	2643	72	23	487	582	520	59	154	733	1315	3958
Sub Total	2089	7537	2065	11691	396	7144	739	8279	19970	453	355	2067	2875	1823	408	539	2770	5645	25615
U Turns				34				81	115				0				0	0	115
Total	2089	7537	2065	11725	396	7144	739	8360	20085	453	355	2067	2875	1823	408	539	2770	5645	25730
EQ 12Hr	2904	10476	2870	16298	550	9930	1027	11620	27918	630	493	2873	3996	2534	567	749	3850	7846	35764
Note: These	values a	are calcu	ulated b	y multipl	ying the	e totals b	by the a	ppropria	te expan	sion fac	tor.			1.39					
AVG 12Hr	2613	9429	2583	14668	495	8937	924	10458	25126	567	444	2586	3597	2281	510	674	3465	7062	32188
Note: These	volume	s are cal	culated	by multi	plying t	he Equiv	valent 1	12 hr. tota	als by the	e AADT	factor.			.90					
AVG 24Hr	3423	12352	3384	19215	649	11708	1211	13700	32915	742	582	3387	4712	2988	669	883	4540	9252	42167
Note: These	volume	s are cal	culated	by multi	plying t	he Aver	age Da	ily 12 hr.	totals by	/ 12 to 2	24 expar	nsion fac	tor.	1.31					

Comments:

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



Turning Movement Count - 15 Minute Summary Report

MARCH RD @ SOLANDT RD

Survey Date: Wednesday, August 10, 201							2016		Т	otal C	Obser	ved L	J-Turr	IS						
									No	orthbour	id: 3	4	So	uthbour	id: 8]	l				
									E	astboun	d: 0		We	estboun	d: 0					
				MA	RCH	RD					_		SOLA	NDTI	RD					
		N	orthboi	und	N	So	uthboun	d	s	STR	Eas	bound		F	Wes	tbound		w	STR	Grand
Time F	Period	LT	ST	RT	тот	LT	ST	RT	тот	тот	LT	ST	RT	тот	LT	ST	RT	тот	тот	Total
07:00	07:15	47	89	48	184	13	268	27	311	495	4	3	13	20	13	1	2	16	36	531
07:15	07:30	51	126	77	254	10	307	28	345	599	3	5	17	25	11	2	1	14	39	638
07:30	07:45	66	110	96	272	24	333	24	381	653	1	4	20	25	19	4	2	25	50	703
07:45	08:00	137	142	146	426	18	306	24	349	775	0	17	15	32	13	10	5	28	60	835
08:00	08:15	107	152	152	411	24	292	37	353	764	7	16	31	54	14	3	9	26	80	844
08:15	08:30	157	154	152	464	26	273	29	331	795	10	25	31	66	14	17	8	39	105	900
08:30	08:45	139	181	171	491	17	312	30	360	851	7	28	35	70	6	19	4	29	99	950
08:45	09:00	157	198	170	525	32	270	29	338	863	3	24	35	62	11	52	8	71	133	996
09:00	09:15	152	198	182	533	29	223	25	277	810	9	26	27	62	22	32	11	65	127	937
09:15	09:30	137	190	154	482	17	222	20	260	742	3	14	24	41	14	23	7	44	85	827
09:30	09:45	97	171	113	381	8	253	25	286	667	3	5	35	43	17	10	3	30	73	740
09:45	10:00	86	177	69	332	13	193	13	219	551	7	7	25	39	14	6	2	22	61	612
11:30	11:45	30	169	27	228	7	189	19	219	447	15	8	58	81	45	9	21	75	156	603
11:45	12:00	56	208	29	296	8	173	18	205	501	33	15	85	133	54	15	20	89	222	723
12:00	12:15	42	228	29	305	13	173	27	214	519	38	11	61	110	50	12	29	91	201	720
12:15	12:30	50	219	33	304	7	193	38	241	545	23	12	53	88	50	15	17	82	170	715
12:30	12:45	59	196	58	313	20	207	30	262	575	18	7	51	76	41	10	13	64	140	715
12:45	13:00	72	192	49	313	19	206	49	279	592	19	15	34	68	30	11	10	51	119	711
13:00	13:15	61	196	43	300	17	192	37	251	551	16	12	49	77	27	12	15	54	131	682
13:15	13:30	39	192	32	265	19	166	33	221	486	17	6	28	51	24	3	11	38	89	575
15:00	15:15	19	207	18	245	7	167	16	192	437	12	7	102	121	51	7	13	71	192	629
15:15	15:30	19	291	29	339	2	178	8	192	531	15	11	49	75	52	2	12	66	141	672
15:30	15:45	33	295	40	368	1	197	10	209	577	13	3	49	65	98	5	15	118	183	760
15:45	16:00	33	305	31	370	3	156	14	174	544	17	5	80	102	72	4	13	89	191	735
16:00	16:15	38	355	17	410	5	192	18	216	626	23	10	122	155	143	20	27	190	345	971
16:15	16:30	37	372	17	429	6	200	22	229	658	27	7	113	147	98	13	30	141	288	946
16:30	16:45	46	328	15	390	7	173	25	212	602	19	19	183	221	164	19	43	226	447	1049
16:45	17:00	24	384	22	431	3	214	14	233	664	19	10	155	184	136	13	34	183	367	1031
17:00	17:15	25	418	16	459	3	219	6	232	691	31	7	185	223	192	19	53	264	487	1178
17:15	17:30	19	403	13	440	10	257	23	291	731	18	5	122	145	121	17	48	186	331	1062
17:30	17:45	24	337	4	366	5	241	10	260	626	16	8	95	119	124	14	29	167	286	912
17:45	18:00	30	354	13	399	3	199	11	218	617	7	3	85	95	83	9	24	116	211	828
TOTAL	.: 2	089	7537	2065	11725	396	7144	739	8360	20085	453	355	2067	2875	1823	408	53	9 277	0 5645	25730
Note: L	J-Turns	are i	include	ed in To	otals.					C	omme	nt:								

Note: U-Turns are included in Totals.



Turning Movement Count - Cyclist Volume Report

Work Order

36153

MARCH RD @ SOLANDT RD

Count Da	te: Wednesda	y, August 10, 20	016			Start Time:	07:00
		MARCH RD					
Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 08:00	7	0	7	3	0	3	10
08:00 09:00	13	1	14	1	2	3	17
09:00 10:00	9	4	13	0	0	0	13
11:30 12:30	1	1	2	2	2	4	6
12:30 13:30	1	0	1	0	0	0	1
15:00 16:00	4	3	7	3	3	6	13
16:00 17:00	1	5	6	3	5	8	14
17:00 18:00	1	3	4	3	2	5	9
Total	37	17	54	15	14	29	83

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.



Turning Movement Count - Heavy Vehicle Report

MARCH RD @ SOLANDT RD

Survey Date: Wednesday, August 10, 2016

			Μ	IARC	H RD							S	OLAN	DT RE)					
		Northb	ound		5	Southb	ound				Eastbo	ound		,	Westbo	ound				
Time	Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	4	24	0	28	0	21	3	24	52	2	1	8	11	0	2	0	2	13	65
08:00	09:00	6	33	2	41	2	24	1	27	68	2	1	7	10	1	5	1	7	17	85
09:00	10:00	7	27	7	41	0	21	2	23	64	0	1	11	12	2	2	2	6	18	82
11:30	12:30	5	15	3	23	0	21	6	27	50	2	0	5	7	1	2	1	4	11	61
12:30	13:30	7	17	2	26	2	21	3	26	52	2	3	9	14	3	4	0	7	21	73
15:00	16:00	4	15	1	20	0	18	3	21	41	1	4	6	11	2	1	1	4	15	56
16:00	17:00	5	18	1	24	0	17	3	20	44	1	1	5	7	2	0	1	3	10	54
17:00	18:00	4	7	1	12	0	13	1	14	26	1	1	2	4	0	0	0	0	4	30
Sub	Total	42	156	17	215	4	156	22	182	397	11	12	53	76	11	16	6	33	109	506
U-Tur	ns (Heav	/y Veł	nicles)		0				0	0				0				0	0	0
Т	otal	42	156	17	0	4	156	22	182	397	11	12	53	76	11	16	6	33	109	506



Work Order

36153

Turning Movement Count - Pedestrian Volume Report

MARCH RD @ SOLANDT RD

Count Dat	e: Wednesday,	August 10, 2016				Start Time:	07:00
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	0	0	0	0	1	1	1
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	1	2	3	0	0	0	3
07:00 08:00	1	2	3	0	1	1	4
08:00 08:15	0	3	3	0	0	0	3
08:15 08:30	0	0	0	1	0	1	1
08:30 08:45	7	2	9	2	0	2	11
08:45 09:00	1	0	1	2	0	2	3
08:00 09:00	8	5	13	5	0	5	18
09:00 09:15	0	5	5	1	0	1	6
09:15 09:30	0	3	3	2	0	2	5
09:30 09:45	0	1	1	0	0	0	1
09:45 10:00	0	1	1	0	0	0	1
09:00 10:00	0	10	10	3	0	3	13
11:30 11:45	1	0	1	3	0	3	4
11:45 12:00	0	0	0	1	0	1	1
12:00 12:15	2	0	2	5	1	6	8
12:15 12:30	3	0	3	1	0	1	4
11:30 12:30	6	0	6	10	1	11	17
12:30 12:45	2	1	3	2	2	4	7
12:45 13:00	0	2	2	1	4	5	7
13:00 13:15	6	2	8	3	0	3	11
13:15 13:30	1	5	6	1	2	3	9
12:30 13:30	9	10	19	7	8	15	34
15:00 15:15	5	2	7	1	0	1	8
15:15 15:30	0	0	0	1	0	1	1
15:30 15:45	2	0	2	2	0	2	4
15:45 16:00	2	2	4	2	1	3	7
15:00 16:00	9	4	13	6	1	7	20
16:00 16:15	1	0	1	0	0	0	1
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	1	2	3	1	0	1	4
16:45 17:00	1	1	8	4	1	5	13
16:00 17:00	9	3	12	5	1	6	18
17:00 17:15	0	2	2	3	U	3	5
17:15 17:30	0	U	0	3	U	3	3
17:30 17:45	2	U	2	1	U	1	3
1/:45 18:00	0	2	2	0	Ű	0	2
17:00 18:00	2	4	6	7	U	7	13
Total	44	38	82	43	12	55	137

Comment:



Turning Movement Count - 15 Min U-Turn Total Report

MARCH RD @ SOLANDT RD

Survey Date:	Wee	dnesday, August ′	10, 2016			
Time Pe	riod	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	3	0	0	3
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	1	1	0	0	2
08:00	08:15	0	0	0	0	0
08:15	08:30	1	3	0	0	4
08:30	08:45	0	1	0	0	1
08:45	09:00	0	7	0	0	7
09:00	09:15	1	0	0	0	1
09:15	09:30	1	1	0	0	2
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	2	4	0	0	6
11:45	12:00	3	6	0	0	9
12:00	12:15	6	1	0	0	7
12:15	12:30	2	3	0	0	5
12:30	12:45	0	5	0	0	5
12:45	13:00	0	5	0	0	5
13:00	13:15	0	5	0	0	5
13:15	13:30	2	3	0	0	5
15:00	15:15	1	2	0	0	3
15:15	15:30	0	4	0	0	4
15:30	15:45	0	1	0	0	1
15:45	16:00	1	1	0	0	2
16:00	16:15	0	1	0	0	1
16:15	16:30	3	1	0	0	4
16:30	16:45	1	7	0	0	8
16:45	17:00	1	2	0	0	3
17:00	17:15	0	4	0	0	4
17:15	17:30	5	1	0	0	6
17:30	17:45	1	4	0	0	5
17:45	18:00	2	5	0	0	7
Tota	1	34	81	0	0	115



Turning Movement Count - Peak Hour Diagram LEGGET DR @ SOLANDT RD




Turning Movement Count - Peak Hour Diagram LEGGET DR @ SOLANDT RD





Turning Movement Count - Peak Hour Diagram LEGGET DR @ SOLANDT RD





Turning Movement Count - Peak Hour Diagram LEGGET DR @ SOLANDT RD





Transportation Services - Traffic Services Turning Movement Count - Full Study Diagram

LEGGET DR @ SOLANDT RD





36905

Turning Movement Count - Full Study Summary Report

LEGGET DR @ SOLANDT RD

Survey D	ate:	Tuesda	ay, Ap	oril 11,	2017				Total (Obser	ved U	-Turn	S				AAD	T Fact	or
								Northbou	ınd: 2		Sout	hbound	: 0				.90		
								Eastbou	nd: 0		Wes	tbound	0						
								F	ull St	udy									
-		Northbo	ound		5	Southb	ound		-		Eastb	ound		,	Westb	ound			
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	Grano Tota
07:00 08:00	25	100	12	137	11	98	36	145	282	309	86	137	532	3	6	3	12	544	826
08:00 09:00	84	161	36	281	37	207	59	303	584	427	147	213	787	5	8	3	16	803	1387
09:00 10:00	69	147	37	253	29	132	49	210	463	372	113	173	658	1	17	6	24	682	1145
11:30 12:30	129	116	13	258	14	89	131	234	492	91	37	47	175	13	68	25	106	281	773
12:30 13:30	68	68	12	148	23	117	94	234	382	131	67	110	308	7	35	8	50	358	740
15:00 16:00	96	67	4	167	5	110	201	316	483	90	12	52	154	23	54	12	89	243	726
16:00 17:00	212	96	3	311	5	238	419	662	973	74	12	43	129	35	124	17	176	305	1278
17:00 18:00	270	106	1	377	1	216	375	592	969	40	11	56	107	37	146	5	188	295	1264
Sub Total	953	861	118	1932	125	1207	1364	2696	4628	1534	485	831	2850	124	458	79	661	3511	8139
U Turns				2				0	2				0				0	0	2
Total	953	861	118	1934	125	1207	1364	2696	4630	1534	485	831	2850	124	458	79	661	3511	8141
EQ 12Hr	1325 Values a	1197 are calcu	164 lated b	2688	174 ving the	1678 totals k	1896 w the a	3747	6435	2132	674	1155	3961	172	637	110	919	4880	11315
Note. These	values a			y munipi	ying the		by the a	ppropriat	e expans		.01.			.59					
AVG 12Hr	1192	1077	148	2419	156 	1510	1706	3373	5792	1919	607	1040	3565	155	573	99	827	4392	10184
Note: These	volumes	are calo	culated	by multi	piying ti	ne Equiv	valent 1	2 nr. tota	is by the	AADT	factor.			90					
AVG 24Hr	1562	1411	193	3169	205	1978	2235	4418	7587	2514	795	1362	4671	203	751	129	1083	5754	13341
Note: These	volumes	are calo	culated	by multi	plying tl	he Aver	age Dai	ly 12 hr. 1	totals by	12 to 24	4 expan	sion fac	tor.	1.31					

Comments:

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



36905

Turning Movement Count - 15 Minute Summary Report

LEGGET DR @ SOLANDT RD

		-			
Survey Date:	Tuesday, April 11, 2017	Tota	al Obs	erved U-Turns	
		Northbound:	2	Southbound:	0
		Eastbound:	0	Westbound:	0

Net N			Ν	orthbou	ind		So	uthboun	d			East	bound			Wes	stbound				
NAME NAME S </td <td>Time l</td> <td>Period</td> <td>ιт</td> <td>ST</td> <td>RT</td> <td>N TOT</td> <td>IТ</td> <td>ST</td> <td>RT</td> <td>S TOT</td> <td>STR TOT</td> <td>IТ</td> <td>ST</td> <td>RT</td> <td>Е ТОТ</td> <td>IТ</td> <td>ST</td> <td>RT</td> <td>W тот</td> <td>STR TOT</td> <td>Grand Total</td>	Time l	Period	ιт	ST	RT	N TOT	IТ	ST	RT	S TOT	STR TOT	IТ	ST	RT	Е ТОТ	IТ	ST	RT	W тот	STR TOT	Grand Total
OTT S S T G Z A Z F Z I Z I Z I Z Z I Z Z I Z Z Z I Z Z Z I Z Z Z I Z <thz< th=""> Z <thz< th=""> <thz< th=""></thz<></thz<></thz<>	07:00	07:15	8	19	3	31	2	16	7	25	56	40	11	27	78	1	3	0	4	82	138
OPPE OPPE Q Q Q Q <td>07:15</td> <td>07:30</td> <td>5</td> <td>17</td> <td>6</td> <td>28</td> <td>4</td> <td>23</td> <td>4</td> <td>31</td> <td>59</td> <td>72</td> <td>16</td> <td>22</td> <td>110</td> <td>1</td> <td>2</td> <td>1</td> <td>4</td> <td>114</td> <td>173</td>	07:15	07:30	5	17	6	28	4	23	4	31	59	72	16	22	110	1	2	1	4	114	173
07.45 08.09 5 32 1 38 2 30 17 49 67 10 30 10	07:30	07:45	7	32	2	41	3	29	8	40	81	77	29	31	137	1	1	1	3	140	221
08:00 08:1 13 32 13 58 3 45 16 <th< td=""><td>07:45</td><td>08:00</td><td>5</td><td>32</td><td>1</td><td>38</td><td>2</td><td>30</td><td>17</td><td>49</td><td>87</td><td>120</td><td>30</td><td>57</td><td>207</td><td>0</td><td>0</td><td>1</td><td>1</td><td>208</td><td>295</td></th<>	07:45	08:00	5	32	1	38	2	30	17	49	87	120	30	57	207	0	0	1	1	208	295
08:30 17 35 5 57 6 61 15 92 149 10 42 50 16 17 16 17 18 17 18 1	08:00	08:15	13	32	13	58	3	45	12	60	118	116	39	43	198	2	3	0	5	203	321
08:35 27 47 10 84 10 59 14 83 67 105 35 62 202 1 1 1 3 205 372 08:45 09:00 27 47 88 62 8 68 10 12 31 88 10 1 25 31 10 1 10 1	08:15	08:30	17	35	5	57	16	61	15	92	149	104	42	50	196	1	0	1	2	198	347
00:00 07 47 8 82 8 42 18 63 100 10 10 1 6 17 34 00:00 09:15 23 25 18 76 6 38 11 55 131 108 49 59 216 0 1 2 50 32 22 50 13 85 8 10 63 148 144 28 50 10 4 4 8 209 357 09:04 10 14 57 67 16 67 16 67 16 67 17 67 17 11:13 11:4 12:0 7 15 16 11 48 16 18 17 18 18 18 18 18 11 18 18 18 18 18 18 18 18 18 18 18 18 18 18	08:30	08:45	27	47	10	84	10	59	14	83	167	105	35	62	202	1	1	1	3	205	372
09:00 09:15 23 35 18 76 6 38 1 55 131 108 59 216 0. 1 217 348 09:15 09:30 22 50 13 85 85 10 63 148 114 28 59 210 0. 4 4 8 209 357 09:45 10 11 28 7 16 53 104 81 20 15 14 4 1 4 1 6 111 111 11:45 12 76 61 13 36 61 115 23 7 16 4 16 17 17 11:45 12:45 73 16 63 51 13 22 63 17 22 17 16 4 3 16 16 16 16 17 16 16 16 16 16 <td>08:45</td> <td>09:00</td> <td>27</td> <td>47</td> <td>8</td> <td>82</td> <td>8</td> <td>42</td> <td>18</td> <td>68</td> <td>150</td> <td>102</td> <td>31</td> <td>58</td> <td>191</td> <td>1</td> <td>4</td> <td>1</td> <td>6</td> <td>197</td> <td>347</td>	08:45	09:00	27	47	8	82	8	42	18	68	150	102	31	58	191	1	4	1	6	197	347
09:30 09:30 13 85 13 45 10 63 148 14 28 50 13 4 4 51 10 27 16 53 144 20 55 136 00 4 4 51 14 24 09:45 10:0 11 28 2 41 5 22 12 39 60 69 16 20 105 14 4 1 6 111 191 11:45 34 19 5 58 0 18 34 62 10 27 16 4 4 6 17 16 14 46 1 17 16 46 1 16 1 12 12 12 12 12 12 12 14 10 12 13 14	09:00	09:15	23	35	18	76	6	38	11	55	131	108	49	59	216	0	1	0	1	217	348
09:45 09:45 13 34 4 51 10 27 16 53 14 81 20 13 13 14 1 <td>09:15</td> <td>09:30</td> <td>22</td> <td>50</td> <td>13</td> <td>85</td> <td>8</td> <td>45</td> <td>10</td> <td>63</td> <td>148</td> <td>114</td> <td>28</td> <td>59</td> <td>201</td> <td>0</td> <td>4</td> <td>4</td> <td>8</td> <td>209</td> <td>357</td>	09:15	09:30	22	50	13	85	8	45	10	63	148	114	28	59	201	0	4	4	8	209	357
09.04 10.00 11 28 2 41 5 22 12 39 80 69 16 20 10 4 10 4 1 6 111 19 11130 1145 34 10 5 58 0 18 34 52 100 24 5 11 40 4 4 7 67 177 18 11445 1200 27 30 1 79 7 23 38 68 171 20 8 10 40 3 25 4 32 7 21 190 1215 1230 29 28 6 65 31 22 58 11 30 17 10 4 1 </td <td>09:30</td> <td>09:45</td> <td>13</td> <td>34</td> <td>4</td> <td>51</td> <td>10</td> <td>27</td> <td>16</td> <td>53</td> <td>104</td> <td>81</td> <td>20</td> <td>35</td> <td>136</td> <td>0</td> <td>8</td> <td>1</td> <td>9</td> <td>145</td> <td>249</td>	09:30	09:45	13	34	4	51	10	27	16	53	104	81	20	35	136	0	8	1	9	145	249
111:15 34 19 5 58 0 18 34 52 10 24 5 11 40 4 17 6 27 67 177 111:45 12:00 27 30 1 59 2 17 37 56 15 23 7 16 46 2 18 7 27 73 188 12:00 12:15 39 39 1 79 73 23 38 68 147 22 8 10 40 3 25 4 32 72 29 21 12:15 12:30 29 18 1 14 6 30 28 64 108 32 17 10 4 4 1 9 23 11 11 11 11 11 12 12 12 14 14 14 13 12 14 14 14 14 14 14 14 14 14 14 14 14 14 14<	09:45	10:00	11	28	2	41	5	22	12	39	80	69	16	20	105	1	4	1	6	111	191
11.45 12.00 27 30 1 59 2 17 37 56 115 23 7 16 46 2 18 7 27 73 188 12.00 12.15 39 39 1 79 7 23 38 68 147 2 8 10 40 3 25 4 32 72 219 12.15 12.30 29 28 6 63 5 31 22 58 121 27 17 10 49 4 8 8 20 69 190 12.45 13.00 20 19 6 45 30 25 55 86 38 24 30 7 18 10 104 190 13.15 13.00 7 18 3 28 24 57 16 1 11 73 15 15.15 13.00 15 17 0 32 31 24 25 26 14 31	11:30	11:45	34	19	5	58	0	18	34	52	110	24	5	11	40	4	17	6	27	67	177
12:15 39 39 3 79 7 23 38 68 147 2 8 10 40 3 25 4 32 72 219 12:15 12:30 29 28 6 63 5 31 22 58 121 2 17 10 49 4 8 8 20 69 190 12:30 12:45 17 16 1 44 6 30 28 64 108 32 17 70	11:45	12:00	27	30	1	59	2	17	37	56	115	23	7	16	46	2	18	7	27	73	188
12:30 29 28 6 63 5 31 22 58 121 22 17 10 49 4 8 8 20 69 190 12:30 12:45 27 16 1 44 6 30 28 64 108 32 17 25 74 3 17 1 21 95 203 12:45 13:00 20 19 6 45 8 37 20 65 10 33 15 30 78 1 5 2 8 8 10 10 14 190 13:10 13:10 7 18 3 41 1 3 2 16 1 1 13 2 16 1 1 13 1 1 1 3 1 3 1 1 1 1 1 1 1 1 1 1	12:00	12:15	39	39	1	79	7	23	38	68	147	22	8	10	40	3	25	4	32	72	219
12:30 12:4 27 16 1 44 6 30 28 64 108 32 17 5 74 3 17 1 21 95 203 12:45 13:00 20 19 6 45 8 37 20 65 100 33 15 30 78 1 5 2 8 86 196 13:00 13:15 14 15 2 31 4 26 25 55 86 38 24 12 50 78 12 14	12:15	12:30	29	28	6	63	5	31	22	58	121	22	17	10	49	4	8	8	20	69	190
12:45 13:00 20 19 6 45 8 37 20 65 110 33 15 30 78 1 5 2 8 86 196 13:00 13:15 14 15 2 31 4 26 25 56 86 38 24 32 94 2 4 4 10 104 190 13:15 13:30 7 18 3 28 67 13 41 14 13 32 46 87 13 4 14 31 57 7 3 15 46 133 15:15 15:30 15 17 0 32 3 24 45 72 104 13 30 2 13 30 2 13 14 14 14 14 14 14 14 14 14 14 14 14 133 <t< td=""><td>12:30</td><td>12:45</td><td>27</td><td>16</td><td>1</td><td>44</td><td>6</td><td>30</td><td>28</td><td>64</td><td>108</td><td>32</td><td>17</td><td>25</td><td>74</td><td>3</td><td>17</td><td>1</td><td>21</td><td>95</td><td>203</td></t<>	12:30	12:45	27	16	1	44	6	30	28	64	108	32	17	25	74	3	17	1	21	95	203
13:00 13:15 14 15 2 31 4 26 25 86 38 24 32 94 2 4 4 10 104 190 13:15 13:30 7 18 3 28 5 24 21 50 78 28 11 23 62 1 9 1 11 73 151 15:00 15:15 23 15 3 41 1 13 32 46 87 13 4 14 31 5 7 3 15 46 133 15:15 15:30 15 17 0 43 1 31 70 102 145 35 50 10 50 11 24 2 37 87 232 15:5 16:00 32 18 1 51 68 147 26 2 15 43 5 10 4 4 4 4 4 4 4 4 4 4 4	12:45	13:00	20	19	6	45	8	37	20	65	110	33	15	30	78	1	5	2	8	86	196
13:51 13:30 7 18 3 28 5 24 21 50 78 28 11 23 62 1 9 1 11 73 151 15:00 15:15 23 15 3 41 1 13 32 46 87 13 4 14 31 5 7 3 15 46 133 15:15 15:30 15 17 0 32 3 24 45 72 104 16 1 13 30 2 13 3 18 48 152 15:05 16:0 32 18 1 51 0 42 54 96 147 26 1 10 4 9 62 20 15 43 5 10 4 19 62 20 15 46 37 16 16 11 18 11 18 11 13 16 10 11 14 14 14 14 15 16	13:00	13:15	14	15	2	31	4	26	25	55	86	38	24	32	94	2	4	4	10	104	190
15:00 15:15 23 15 3 41 1 13 32 46 87 13 4 14 31 5 7 3 15 46 133 15:15 15:30 15 17 0 32 3 24 45 72 104 16 1 13 30 2 13 3 18 48 152 15:30 15:4 26 17 0 43 1 31 70 102 145 35 5 10 50 11 24 2 37 87 232 15:45 16:00 32 18 1 51 0 42 54 96 147 26 2 15 43 5 10 4 19 62 209 16:00 16:15 40 26 1 67 1 68 134 208 11 30 5 28 1 34 64 272 16:15 16:30 52 2	13:15	13:30	7	18	3	28	5	24	21	50	78	28	11	23	62	1	9	1	11	73	151
15:15 15:30 15 17 0 32 3 24 45 72 104 16 1 13 30 2 13 3 18 48 152 15:30 15:45 26 17 0 43 1 31 70 102 145 35 5 10 50 11 24 2 37 87 232 15:45 16:00 32 18 1 51 0 42 54 96 147 26 2 15 43 5 10 4 19 62 209 16:00 16:15 40 26 1 67 1 68 115 184 251 22 5 11 38 7 33 8 48 64 37 16:15 16:30 52 22 7 7 2 41 16 1 1 16 31 1 1 14 30 1 34 64 51 80 321	15:00	15:15	23	15	3	41	1	13	32	46	87	13	4	14	31	5	7	3	15	46	133
15:30 15:45 26 17 0 43 1 31 70 102 145 35 5 10 50 11 24 2 37 87 232 15:45 16:00 32 18 1 51 0 42 54 96 147 26 2 15 43 5 10 4 19 62 209 16:00 16:15 40 26 1 67 1 68 15 184 251 22 5 11 38 7 33 8 48 86 337 16:15 16:30 52 22 0 74 2 49 83 142 24 1 30 5 28 1 34 64 272 16:30 16:45 52 25 2 79 2 56 104 162 241 1 7 29 13 34 4 51 80 321 16:45 17:00 68 31 </td <td>15:15</td> <td>15:30</td> <td>15</td> <td>17</td> <td>0</td> <td>32</td> <td>3</td> <td>24</td> <td>45</td> <td>72</td> <td>104</td> <td>16</td> <td>1</td> <td>13</td> <td>30</td> <td>2</td> <td>13</td> <td>3</td> <td>18</td> <td>48</td> <td>152</td>	15:15	15:30	15	17	0	32	3	24	45	72	104	16	1	13	30	2	13	3	18	48	152
15:45 16:00 32 18 1 51 0 42 54 96 147 26 2 15 43 5 10 4 19 62 209 16:00 16:15 40 26 1 67 1 68 115 184 251 22 5 11 38 7 33 8 48 86 337 16:15 16:30 52 22 0 74 2 49 83 134 208 16 3 11 30 5 28 1 34 64 272 16:30 16:45 52 25 2 79 2 56 104 162 211 1 7 29 13 34 4 51 80 321 16:45 17:00 68 23 0 91 0 65 117 182 273 15 3 10 29 4 43 75 348 17:00 17:15 94 3	15:30	15:45	26	17	0	43	1	31	70	102	145	35	5	10	50	11	24	2	37	87	232
16:00 16:15 40 26 1 67 1 68 115 184 251 22 5 11 38 7 33 8 48 86 337 16:15 16:30 52 22 0 74 2 49 83 134 208 16 3 11 30 5 28 1 34 64 272 16:30 16:45 52 25 2 79 2 56 104 162 241 21 1 7 29 13 34 4 51 80 321 16:45 17:00 68 23 0 91 0 65 117 182 273 15 3 14 32 10 29 4 43 75 348 17:00 17:15 94 31 1 164 267 8 3 20 31 12 37 1 50 81 348 17:15 17:30 76 27 <td< td=""><td>15:45</td><td>16:00</td><td>32</td><td>18</td><td>1</td><td>51</td><td>0</td><td>42</td><td>54</td><td>96</td><td>147</td><td>26</td><td>2</td><td>15</td><td>43</td><td>5</td><td>10</td><td>4</td><td>19</td><td>62</td><td>209</td></td<>	15:45	16:00	32	18	1	51	0	42	54	96	147	26	2	15	43	5	10	4	19	62	209
16:15 16:30 52 22 0 74 2 49 83 134 208 16 3 11 30 5 28 1 34 64 272 16:30 16:45 52 25 2 79 2 56 104 162 241 21 1 7 29 13 34 4 51 80 321 16:45 17:00 68 23 0 91 0 65 117 182 273 15 3 14 32 10 29 4 43 75 348 17:00 17:15 94 31 1 126 0 66 121 187 313 12 3 13 12 37 1 50 83 396 17:15 17:30 76 27 0 103 1 59 104 164 267 8 3 20 31 12 37 1 50 81 348 17:30 <td< td=""><td>16:00</td><td>16:15</td><td>40</td><td>26</td><td>1</td><td>67</td><td>1</td><td>68</td><td>115</td><td>184</td><td>251</td><td>22</td><td>5</td><td>11</td><td>38</td><td>7</td><td>33</td><td>8</td><td>48</td><td>86</td><td>337</td></td<>	16:00	16:15	40	26	1	67	1	68	115	184	251	22	5	11	38	7	33	8	48	86	337
16:30 16:45 52 25 2 79 2 56 104 162 241 21 1 7 29 13 34 4 51 80 321 16:45 17:00 68 23 0 91 0 65 117 182 273 15 3 14 32 10 29 4 43 75 348 17:00 17:15 94 31 1 126 0 66 121 187 313 12 3 13 28 9 46 0 55 83 396 17:15 17:30 76 27 0 103 1 59 104 164 267 8 3 20 31 12 37 1 50 81 348 17:15 17:30 76 26 0 82 0 54 83 137 219 10 3 12 36 25 2 33 56 226 17:45 <td< td=""><td>16:15</td><td>16:30</td><td>52</td><td>22</td><td>0</td><td>74</td><td>2</td><td>49</td><td>83</td><td>134</td><td>208</td><td>16</td><td>3</td><td>11</td><td>30</td><td>5</td><td>28</td><td>1</td><td>34</td><td>64</td><td>272</td></td<>	16:15	16:30	52	22	0	74	2	49	83	134	208	16	3	11	30	5	28	1	34	64	272
16:45 17:00 68 23 0 91 0 65 117 182 273 15 3 14 32 10 29 4 43 75 348 17:00 17:15 94 31 1 126 0 66 121 187 313 12 3 13 28 9 46 0 55 83 396 17:15 17:30 76 27 0 103 1 59 104 164 267 8 3 20 31 12 37 1 50 81 348 17:30 17:45 56 26 0 82 0 54 83 137 219 10 3 12 25 10 38 2 50 75 294 17:45 18:00 44 22 0 66 0 37 67 104 170 10 2 11 23 6 25 2 33 56 226 TOT	16:30	16:45	52	25	2	79	2	56	104	162	241	21	1	7	29	13	34	4	51	80	321
17:00 17:15 94 31 1 126 0 66 121 187 313 12 3 13 28 9 46 0 55 83 396 17:15 17:30 76 27 0 103 1 59 104 164 267 8 3 20 31 12 37 1 50 81 348 17:30 17:45 56 26 0 82 0 54 83 137 219 10 3 12 25 10 38 2 50 75 294 17:45 18:00 44 22 0 66 0 37 67 104 170 10 2 11 23 6 25 2 33 56 226 TOTAL: 953 861 118 1934 125 1207 1364 2696 4630 1534 485 831 2850 124 458 79 661 3511 8141 8141	16:45	17:00	68	23	0	91	0	65	117	182	273	15	3	14	32	10	29	4	43	75	348
17:15 17:30 76 27 0 103 1 59 104 164 267 8 3 20 31 12 37 1 50 81 348 17:30 17:45 56 26 0 82 0 54 83 137 219 10 3 12 25 10 38 2 50 75 294 17:45 18:00 44 22 0 66 0 37 67 104 170 10 2 11 23 6 25 2 33 56 226 TOTAL: 953 861 118 1934 125 1207 1364 2696 4630 1534 485 831 2850 124 458 79 661 3511 8141	17:00	17:15	94	31	1	126	0	66	121	187	313	12	3	13	28	9	46	0	55	83	396
17:30 17:45 56 26 0 82 0 54 83 137 219 10 3 12 25 10 38 2 50 75 294 17:45 18:00 44 22 0 66 0 37 67 104 170 10 2 11 23 6 25 2 33 56 226 TOTAL: 953 861 118 1934 125 1207 1364 2696 4630 1534 485 831 2850 124 458 79 661 3511 8141	17:15	17:30	76	27	0	103	1	59	104	164	267	8	3	20	31	12	37	1	50	81	348
17:45 18:00 44 22 0 66 0 37 67 104 170 10 2 11 23 6 25 2 33 56 226 TOTAL: 953 861 118 1934 125 1207 1364 2696 4630 1534 485 831 2850 124 458 79 661 3511 8141	17:30	17:45	56	26	0	82	0	54	83	137	219	10	3	12	25	10	38	2	50	75	294
TOTAL: 953 861 118 1934 125 1207 1364 2696 4630 1534 485 831 2850 124 458 79 661 3511 8141	17:45	18:00	44	22	0	66	0	37	67	104	170	10	2	11	23	6	25	2	33	56	226
Nata II Iuma ang matualad in Latala	TOTAL	.: 9	953	861	118	1934	125	1207	1364	2696	4630	1534	485	831	2850	124	458	79	66 ⁻	1 3511	8141

Note: U-Turns are included in Totals.



Turning Movement Count - Cyclist Volume Report

Work Order

36905

LEGGET DR @ SOLANDT RD

Count Date: Tuesday, April 11, 2017

Start Time: 07:00

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 08:00	2	1	3	0	0	0	3
08:00 09:00	0	0	0	1	0	1	1
09:00 10:00	4	0	4	1	0	1	5
11:30 12:30	1	0	1	0	1	1	2
12:30 13:30	0	0	0	2	0	2	2
15:00 16:00	0	0	0	0	0	0	0
16:00 17:00	0	0	0	0	0	0	0
17:00 18:00	0	4	4	0	0	0	4
Total	7	5	12	4	1	5	17

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.



Turning Movement Count - Heavy Vehicle Report

LEGGET DR @ SOLANDT RD

Survey Date:

Tuesday, April 11, 2017

		Northb	ound		ę	Southb	ound				Eastbo	ound		١	Westbo	ound				
Time F	Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	3	8	1	12	1	1	4	6	18	0	1	3	4	1	1	1	3	7	25
08:00	09:00	5	4	0	9	3	0	0	3	12	3	1	2	6	0	3	0	3	9	21
09:00	10:00	4	5	0	9	3	4	2	9	18	1	0	4	5	0	3	1	4	9	27
11:30	12:30	4	3	2	9	0	5	3	8	17	2	1	3	6	1	2	0	3	9	26
12:30	13:30	3	2	1	6	0	2	1	3	9	1	0	4	5	0	0	1	1	6	15
15:00	16:00	4	3	0	7	2	4	1	7	14	4	2	5	11	0	1	3	4	15	29
16:00	17:00	1	0	0	1	1	4	3	8	9	5	4	2	11	0	1	3	4	15	24
17:00	18:00	0	1	0	1	0	3	0	3	4	1	4	2	7	1	0	2	3	10	14
Sub	Total	24	26	4	54	10	23	14	47	101	17	13	25	55	3	11	11	25	80	181
U-Turn	s (Heav	vy Vel	nicles)		0				0	0				0				0	0	0
Tot	tal	24	26	4	0	10	23	14	47	101	17	13	25	55	3	11	11	25	80	181
Heavy V	/ehicles	includ	e Buse	s, Sing	le-Unit	Trucks	and Ar	ticulate	ed Truck	ks. Furt	her, the	y ARE	include	d in the	Turnin	g Move	ement (Count S	ummary.	



Work Order

36905

Turning Movement Count - Pedestrian Volume Report

LEGGET DR @ SOLANDT RD

Count Dat	<mark>e:</mark> Tuesday, Ap	ril 11, 2017				Start Time:	07:00
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	0	0	0	0	1	1	1
07:30 07:45	0	1	1	1	2	3	4
07:45 08:00	0	0	0	0	0	0	0
07:00 08:00	0	1	1	1	3	4	5
08:00 08:15	3	3	6	0	7	7	13
08:15 08:30	2	2	4	2	2	4	8
08:30 08:45	0	1	1	0	1	1	2
08:45 09:00	0	2	2	0	1	1	3
08:00 09:00	5	8	13	2	11	13	26
09:00 09:15	1	1	2	0	2	2	4
09:15 09:30	0	0	0	0	7	7	7
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	2	2	2
09:00 10:00	1	1	2	0	11	11	13
11:30 11:45	1	2	3	0	5	5	8
11:45 12:00	1	1	2	2	10	12	14
12:00 12:15	0	1	1	1	14	15	16
12:15 12:30	4	0	4	1	23	24	28
11:30 12:30	6	4	10	4	52	56	66
12:30 12:45	3	5	8	0	23	23	31
12:45 13:00	4	4	8	1	20	21	29
13:00 13:15	0	2	2	1	11	12	14
13:15 13:30	1	0	1	0	5	5	6
12:30 13:30	8	11	19	2	59	61	80
15:00 15:15	2	2	4	0	5	5	9
15:15 15:30	0	0	0	0	4	4	4
15:30 15:45	0	0	0	5	0	5	5
15:45 16:00	0	0	0	0	3	3	3
15:00 16:00	2	2	4	5	12	17	21
16:00 16:15	1	0	1	0	1	1	2
16:15 16:30	0	0	0	0	3	3	3
16:30 16:45	1	0	1	0	2	2	3
16:45 17:00	1	1	2	0	3	3	5
16:00 17:00	3	1	4	0	9	9	13
17:00 17:15	2	0	2	0	3	3	5
17:15 17:30	2	2	4	2	5	7	11
17:30 17:45	2	0	2	2	7	9	11
17:45 18:00	0	0	0	1	1	2	2
17:00 18:00	6	2	8	5	16	21	29
Total	31	30	61	19	173	192	253

Comment:



Work Order 36905

Turning Movement Count - 15 Min U-Turn Total Report

LEGGET DR @ SOLANDT RD

Survey Date:	-	Tuesday, April 11,	2017			
Time Pe	riod	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	1	0	0	0	1
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	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	1	0	0	0	1
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
Tota	1	2	0	0	0	2



Turning Movement Count - Full Study Peak Hour Diagram CARLING AVE/STATION RD @ MARCH RD





Turning Movement Count - Full Study Peak Hour Diagram CARLING AVE/STATION RD @ MARCH RD





Turning Movement Count - Full Study Peak Hour Diagram CARLING AVE/STATION RD @ MARCH RD





Turning Movement Count - Full Study Peak Hour Diagram CARLING AVE/STATION RD @ MARCH RD





Turning Movement Count - Full Study Diagram

CARLING AVE/STATION RD @ MARCH RD





36154

Turning Movement Count - Full Study Summary Report

CARLING AVE/STATION RD @ MARCH RD

Survey Da	ate:	Wedne	esday	, Augu	ist 10,	2016			Total	Obse	rved U	-Turns	•				AAD	T Fact	or
								Northbo	und:	17	Sout	hbound:	4				.90		
								Eastbou	und:	0	Wes	tbound:	0						
								F	Full S	tudy									
			I	MARC	H RD						CA	RLING	AVE	/STAT	ION R	D			
-		Northb	ound			Southb	ound				Eastb	ound			Westb	ound			
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 Tota
07:00 08:00	104	1009	73	1186	294	971	121	1386	2572	48	24	5	77	21	14	90	125	202	2774
08:00 09:00	92	1847	87	2026	302	937	120	1359	3385	59	29	8	96	32	12	151	195	291	3676
09:00 10:00	68	1574	48	1690	185	847	116	1148	2838	72	12	14	98	33	21	155	209	307	3145
11:30 12:30	50	851	52	953	172	988	103	1263	2216	67	27	21	115	63	38	187	288	403	2619
12:30 13:30	53	966	53	1072	154	901	73	1128	2200	73	19	13	105	58	7	183	248	353	2553
15:00 16:00	38	1036	29	1103	146	1096	47	1289	2392	56	19	61	136	55	9	214	278	414	2806
16:00 17:00	36	1309	36	1381	211	1618	42	1871	3252	25	18	36	79	113	13	315	441	520	3772
17:00 18:00	16	1322	39	1377	292	1767	52	2111	3488	20	11	24	55	108	14	294	416	471	3959
Sub Total	457	9914	417	10788	1756	9125	674	11555	22343	420	159	182	761	483	128	1589	2200	2961	25304
U Turns				17				4	21				0				0	0	21
Total	457	9914	417	10805	1756	9125	674	11559	22364	420	159	182	761	483	128	1589	2200	2961	25325
EQ 12Hr	635	13780	580	15019	2441	12684	937	16067	31086	584	221	253	1058	671	178	2209	3058	4116	35202
Note: These	values	are calcu	lated b	y multip	lying the	e totals b	by the a	appropria	te expar	nsion fac	ctor.			1.39					
AVG 12Hr	572	12402	522	13517	2197	11415	843	14460	27977	525	199	228	952	604	160	1988	2752	3704	31681
Note: These	volume	s are calo	culated	by mult	iplying t	he Equi	valent ²	12 hr. tota	als by th	e AADT	factor.			.90					
AVG 24Hr	749	16247	683	17707	2878	14954	1105	18943	36650	688	261	298	1247	792	210	2604	3605	4852	41502
Note: These	volume	s are calo	culated	by mult	iplying t	he Aver	age Da	ily 12 hr.	totals b	y 12 to 2	24 expan	sion fact	tor.	1.31					

Comments:

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



Turning Movement Count - 15 Minute Summary Report

CARLING AVE/STATION RD @ MARCH RD

Sur	vey D	ate:	W	edne	sday, <i>i</i>	Augus	st 10, 2	2016		1	otal	Obser	ved l	J-Turi	ns					
									N	orthbour	nd: 1	7	So	uthbou	nd: 4					
									E	astboun	a: ()			estbour	nd: ()					
				IVI A	ARCH	RD							IG AI	/E/51						
		N	lorthbol	ind	N	So	uthboun	Id	e	STD	Eas	tbound		F	Wes	stbound		w	STD	Grand
Time I	Period	LT	ST	RT	тот	LT	ST	RT	тот	тот	LT	ST	RT	тот	LT	ST	RT	тот	тот	Total
07:00	07:15	23	158	9	190	56	232	33	321	511	10	4	2	16	1	6	19	26	42	553
07:15	07:30	27	231	16	275	71	229	33	333	608	8	8	1	17	4	4	22	30	47	655
07:30	07:45	23	252	17	292	78	267	27	372	664	12	5	0	17	6	1	22	29	46	710
07:45	08:00	31	368	31	430	89	243	28	360	790	18	7	2	27	10	3	27	40	67	857
08:00	08:15	25	424	18	467	60	244	30	334	801	13	7	1	21	8	3	22	33	54	855
08:15	08:30	26	431	34	491	92	204	34	330	821	22	9	1	32	13	7	37	57	89	910
08:30	08:45	23	495	21	539	88	264	26	378	917	10	6	3	19	4	1	39	44	63	980
08:45	09:00	18	497	14	529	62	225	30	317	846	14	7	3	24	7	1	53	61	85	931
09:00	09:15	20	484	14	518	74	226	33	333	851	17	4	2	23	13	3	45	61	84	935
09:15	09:30	16	482	15	513	32	168	23	223	736	21	2	5	28	5	5	41	51	79	815
09:30	09:45	15	320	10	345	53	261	41	355	700	18	2	2	22	7	9	42	58	80	780
09:45	10:00	17	288	9	315	26	192	19	237	552	16	4	5	25	8	4	27	39	64	616
11:30	11:45	10	178	12	201	34	240	22	297	498	13	6	3	22	15	11	38	64	86	584
11:45	12:00	9	216	12	238	47	253	27	328	566	14	9	8	31	24	7	48	79	110	676
12:00	12:15	13	221	9	243	53	278	31	362	605	21	9	9	39	9	8	57	74	113	718
12:15	12:30	18	236	19	274	38	217	23	279	553	19	3	1	23	15	12	44	71	94	647
12:30	12:45	13	237	15	266	42	232	29	303	569	28	5	4	37	13	2	46	61	98	667
12:45	13:00	14	256	18	288	33	226	18	277	565	22	7	0	29	14	1	53	68	97	662
13:00	13:15	17	241	10	270	48	257	8	313	583	13	4	5	22	12	1	44	57	79	662
13:15	13:30	9	232	10	251	31	186	18	235	486	10	3	4	17	19	3	40	62	79	565
15:00	15:15	13	178	5	197	31	254	13	298	495	11	5	14	30	13	2	45	60	90	585
15:15	15:30	7	271	6	284	48	263	14	325	609	15	5	6	26	12	2	58	72	98	707
15:30	15:45	8	287	9	305	28	285	11	324	629	20	4	32	56	19	2	54	75	131	760
15:45	16:00	10	300	9	319	39	294	9	342	661	10	5	9	24	11	3	57	71	95	756
16:00	16:15	11	329	10	350	51	365	9	425	775	6	6	13	25	26	3	81	110	135	910
16:15	16:30	7	341	9	358	54	380	9	444	802	3	3	7	13	32	2	68	102	115	917
16:30	16:45	9	306	6	322	55	444	13	512	834	8	4	8	20	34	3	82	119	139	973
16:45	17:00	9	333	11	353	51	429	11	491	844	8	5	8	21	21	5	84	110	131	975
17:00	17:15	2	386	8	398	85	504	11	600	998	2	2	9	13	30	6	69	105	118	1116
17:15	17:30	7	326	10	346	100	484	15	599	945	8	2	5	15	35	5	82	122	137	1082
17:30	17:45	2	305	13	320	58	434	11	503	823	4	5	5	14	28	2	73	103	117	940
17:45	18:00	5	305	8	318	49	345	15	409	727	6	2	5	13	15	1	70	86	99	826
ΤΟΤΑΙ	_: '	457	9914	417	10805	1756	9125	674	11559	9 22364	420	159	182	761	483	128	15	89 220	00 2961	25325
Note: L	J-Turns	are i	include	ed in T	otals.					C	Comme	ent:								

Note: U-Turns are included in Totals.



Turning Movement Count - Cyclist Volume Report

Work Order

CARLING AVE/STATION RD @ MARCH RD

Start Time: 07:00 Count Date: Wednesday, August 10, 2016 MARCH RD **CARLING AVE/STATION RD** Northbound Southbound Street Total Eastbound Street Total Grand Total Time Period Westbound 07:00 08:00 08:00 09:00 09:00 10:00 11:30 12:30 12:30 13:30 15:00 16:00 16:00 17:00 17:00 18:00 Total

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.



Work Order

36154

Turning Movement Count - Pedestrian Volume Report

CARLING AVE/STATION RD @ MARCH RD

Count Dat	<mark>e:</mark> Wednesday,	August 10, 2016				Start Time:	07:00
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	1	0	1	0	0	0	1
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	0	0	0	1	1	1
07:45 08:00	2	0	2	1	2	3	5
07:00 08:00	3	0	3	1	3	4	7
08:00 08:15	3	0	3	0	2	2	5
08:15 08:30	0	1	1	1	3	4	5
08:30 08:45	0	0	0	0	10	10	10
08:45 09:00	5	2	7	0	7	7	14
08:00 09:00	8	3	11	1	22	23	34
09:00 09:15	1	0	1	3	0	3	4
09:15 09:30	0	0	0	2	4	6	6
09:30 09:45	1	0	1	1	2	3	4
09:45 10:00	1	0	1	0	1	1	2
09:00 10:00	3	0	3	6	7	13	16
11:30 11:45	1	0	1	0	0	0	1
11:45 12:00	1	0	1	2	0	2	3
12:00 12:15	1	0	1	3	0	3	4
12:15 12:30	1	0	1	1	2	3	4
11:30 12:30	4	0	4	6	2	8	12
12:30 12:45	3	2	5	1	3	4	9
12:45 13:00	1	3	4	3	2	5	9
13:00 13:15	0	2	2	3	2	5	7
13:15 13:30	0	0	0	1	0	1	1
12:30 13:30	4	7	11	8	7	15	26
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	1	0	1	0	1	1	2
15:30 15:45	1	0	1	0	0	0	1
15:45 16:00	0	1	1	0	0	0	1
15:00 16:00	2	1	3	0	1	1	4
16:00 16:15	2	0	2	1	2	3	5
16:15 16:30	0	0	0	0	1	1	1
16:30 16:45	1	0	1	1	1	2	3
16:45 17:00	0	2	2	2	0	2	4
16:00 17:00	3	2	5	4	4	8	13
17:00 17:15	1	U	1	U	1	1	2
17:15 17:30	U	U	0	2	U	2	2
17:30 17:45	2	U	2	0	2	2	4
17:45 18:00	1	U	1	0	1	1	2
17:00 18:00	4	U	4	2	4	6	10
Total	31	13	44	28	50	78	122

Comment:



Turning Movement Count - 15 Min U-Turn Total Report

CARLING AVE/STATION RD @ MARCH RD

Survey Date:	Wee	dnesday, August ′	10, 2016			
Time Pe	riod	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	1	0	0	0	1
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	1	0	0	0	1
11:30	11:45	1	1	0	0	2
11:45	12:00	1	1	0	0	2
12:00	12:15	0	0	0	0	0
12:15	12:30	1	1	0	0	2
12:30	12:45	1	0	0	0	1
12:45	13:00	0	0	0	0	0
13:00	13:15	2	0	0	0	2
13:15	13:30	0	0	0	0	0
15:00	15:15	1	0	0	0	1
15:15	15:30	0	0	0	0	0
15:30	15:45	1	0	0	0	1
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	1	1	0	0	2
16:30	16:45	1	0	0	0	1
16:45	17:00	0	0	0	0	0
17:00	17:15	2	0	0	0	2
17:15	17:30	3	0	0	0	3
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Tota	1	17	4	0	0	21



36154

Turning Movement Count - Heavy Vehicle Report

CARLING AVE/STATION RD @ MARCH RD

Survey Date: Wednesday, August 10, 2016

			Μ	IARC	H RD						CAF	RLING	6 AVE	/STAT	ION I	RD				
	1	Northb	ound		5	Southb	ound				Eastbo	ound			Westbo	ound				
Time	Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	2	24	8	34	3	24	1	28	62	0	1	0	1	2	1	3	6	7	69
08:00	09:00	2	36	8	46	2	28	0	30	76	2	0	1	3	2	0	4	6	9	85
09:00	10:00	3	33	6	42	2	34	4	40	82	1	0	3	4	4	1	3	8	12	94
11:30	12:30	3	18	5	26	3	24	0	27	53	2	0	2	4	5	3	5	13	17	70
12:30	13:30	1	22	5	28	3	30	2	35	63	2	2	2	6	5	0	4	9	15	78
15:00	16:00	0	18	3	21	3	24	1	28	49	1	0	0	1	3	0	2	5	6	55
16:00	17:00	1	21	3	25	1	20	0	21	46	0	0	0	0	7	0	5	12	12	58
17:00	18:00	0	12	2	14	0	22	0	22	36	0	0	0	0	5	0	1	6	6	42
Sub	Total	12	184	40	236	17	206	8	231	467	8	3	8	19	33	5	27	65	84	551
U-Tur	ns (Heav	vy Vel	nicles)		0				0	0				0				0	0	0
Т	otal	12	184	40	0	17	206	8	231	467	8	3	8	19	33	5	27	65	84	551



Appendix B – Collision Data







City Operations - Transportation Services Collision Details Report - Public Version

From: January 1, 2014 To: December 31, 2018

Location: CARLING AVE/STATION RD @ MARCH RD										
Traffic Control: Trat	ffic signal			Total Collisions: 52						
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	r Vehicle type	First Event	No. Ped	
2014-Jan-24, Fri,11:38	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle		
					North	Going ahead	Pick-up truck	Other motor vehicle		
2014-Feb-14, Fri,09:00	Snow	SMV other	P.D. only	Packed snow	South	Going ahead	Pick-up truck	Other		
2014-Jul-27, Sun,13:10	Clear	Other	Fatal injury	Dry	North	Turning right	Automobile, station wagon	Curb		
					West	Stopped	Automobile, station wagon	Other motor vehicle		
2014-Jul-30, Wed,19:31	Rain	Angle	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle		
					West	Turning left	Automobile, station wagon	Other motor vehicle		
2014-Aug-09, Sat,00:45	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle		
					East	Turning right	Pick-up truck	Other motor vehicle		
2014-Sep-03, Wed,18:09	Clear	Other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle		
					South	Stopped	Pick-up truck	Other motor vehicle		

2014-Dec-07, Sun,12:40	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-03, Sat,13:07	Snow	Turning movement	P.D. only	Packed snow	North	Going ahead	Passenger van	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2015-Jan-13, Tue,08:49	Clear	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-23, Fri,18:32	Clear	Rear end	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-03, Tue,09:12	Snow	SMV other	P.D. only	Slush	West	Turning right	Automobile, station wagon	Skidding/sliding
2015-Feb-27, Fri,21:22	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-10, Tue,07:53	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jun-19, Fri,10:19	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle

					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-08, Wed,12:52	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-16, Thu,12:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Oct-19, Mon,21:25	Rain	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Dec-21, Mon,12:20	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Dec-23, Wed,18:45	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-Jan-18, Mon,17:28	Clear	Rear end	P.D. only	Wet	West	Slowing or stopping	Passenger van	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2016-Jan-25, Mon,18:00	Clear	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Unknown	Unknown	Other motor vehicle
2016-Feb-08, Mon,09:10	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Mar-23, Wed,10:16	Snow	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Apr-28, Thu,15:57	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Jun-01, Wed,13:23	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Aug-11, Thu,17:22	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-07, Fri,10:27	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2016-Oct-14, Fri,07:35	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-22, Sat,15:21	Strong wind	SMV other	P.D. only	Wet	West	Stopped	Automobile, station wagon	Other
2016-Nov-17, Thu,08:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stoppin	g Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Nov-24 Thu 09:10	Snow	Turning movement	P.D. only	Loose snow	South	Going abead	Automobile	Other motor
2010 100 21, 110,00.10	Chow		1.D. only		Coutin	Comg anoda	station wagon	vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jan-03, Tue,07:02	Freezing Rain	Angle	P.D. only	Slush	West	Turning right	Automobile, station wagon	Curb
					South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jan-25, Wed,17:25	Snow	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Mar-17, Fri,09:14	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2017-Apr-21, Fri,12:22	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-May-16, Tue,07:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Jul-06, Thu,18:42	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Municipal transit bus	Other motor vehicle
2017-Sep-03, Sun,11:25	Rain	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Skidding/sliding
2017-Sep-12, Tue,09:02	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2017-Nov-07, Tue,13:06	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2017-Nov-27, Mon,18:10	Clear	Sideswipe	P.D. only	lce	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-Dec-28, Thu,07:34	Clear	Angle	P.D. only	lce	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle

					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Feb-07, Wed,12:25	Snow	Turning movement	P.D. only	Loose snow	North	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Turning left	Automobile, station wagon	Other motor vehicle
2018-Mar-02, Fri,09:37	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Mar-08, Thu,16:44	Snow	Rear end	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2018-Mar-28, Wed,18:49	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Apr-02, Mon,11:57	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-May-02, Wed,14:34	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2018-Jun-20, Wed,09:59	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2018-Oct-15, Mon,11:33	Rain	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2018-Nov-04, Sun,10:50	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Dec-09, Sun,04:00	Clear	SMV other	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Curb
Location: LEGGE	ET DR @ SOL	ANDT RD						
Traffic Control: Tra	ffic signal						Total Co	ollisions: 4
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event No. Ped
2017-Nov-02, Thu,17:32	Rain	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jan-31, Wed,17:44	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Feb-03, Sat.02:08	Olaan	010/ //		_				

2018-May-29, Tue,17:20	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Unknown	Unknown	Other motor vehicle

Location: MARCH RD @ SOLANDT RD

Traffic Control: Traffic signal

Total Collisions: 56

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2014-Jan-05, Sun,09:47	Snow	SMV other	P.D. only	Loose snow	North	Turning right	Automobile, station wagon	Ran off road	
2014-Feb-11, Tue,16:20	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2014-Mar-17, Mon,16:25	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-May-12, Mon,17:30	Clear	Sideswipe	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Motorcycle	Other motor vehicle	
2014-Jul-08, Tue,17:29	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Truck - dump	Other motor vehicle	
2014-Jul-10, Thu,17:04	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	

					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-10, Thu,17:50	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-18, Fri,17:37	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Sep-03, Wed,09:58	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Sep-30, Tue,09:13	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Oct-02, Thu,12:19	Clear	Angle	P.D. only	Dry	North	Slowing or stopping	J Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2014-Dec-08, Mon,07:42	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning right	Passenger van	Other motor vehicle

2015-Jan-12, Mon,07:20	Snow	Turning movement	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Skidding/sliding
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-21, Wed,17:08	Clear	Rear end	P.D. only	Packed snow	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2015-Feb-04, Wed,14:30	Snow	Rear end	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle
2015-Mar-18, Wed,13:23	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jun-18, Thu,08:04	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jul-15, Wed,20:15	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle
2015-Jul-17, Fri,17:30	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle

2015-Aug-27, Thu,13:56	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Oct-19, Mon,08:52	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Dec-09, Wed,10:31	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2015-Dec-29, Tue,20:29	Snow	Sideswipe	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Snow plow	Other motor vehicle
2016-Feb-16, Tue,11:02	Snow	Turning movement	P.D. only	Loose snow	West	Turning left	Passenger van	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Feb-23, Tue,15:50	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	a Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2016-Mar-02, Wed,19:35	Clear	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Passenger van	Other motor vehicle

2016-Mar-14, Mon,10:46	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-May-03, Tue,16:55	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2016-Aug-17, Wed,10:51	Clear	Rear end	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Sep-16, Fri,11:14	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Passenger van	Debris falling off vehicle
2016-Oct-20, Thu,16:28	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2016-Oct-31, Mon,08:05	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2016-Nov-20, Sun,20:27	Drifting Snow	SMV other	P.D. only	lce	North	Turning left	Automobile, station wagon	Pole (utility, power)

2016-Nov-28, Mon,12:27	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,19:15	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2017-Mar-22, Wed,09:35	Clear	Turning movement	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Apr-18, Tue,15:58	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Motorcycle	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-May-09, Tue,09:30	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Pick-up truck	Other motor vehicle
2017-Jun-02, Fri,07:58	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jun-13, Tue,17:30	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2017-Sep-12, Tue,07:13	Clear	Rear end	P.D. only	Dry	East	Going ahead	Passenger van	Other motor vehicle
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					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-24, Tue,07:37	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Oct-31, Tue,15:47	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Dec-20, Wed,15:51	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-21, Thu,10:30	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2018-Jan-31, Wed,17:54	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Skidding/sliding
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Feb-26, Mon,19:50	Clear	Turning movement	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle

2018-Mar-14, Wed,08:56	Snow	Turning movement	Non-fatal injury	Slush	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Apr-06, Fri,16:40	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-May-28, Mon,20:50	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2018-Jun-06, Wed,20:24	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-09, Thu,09:19	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-24, Fri,15:53	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Oct-09, Tue,06:53	Clear	Rear end	P.D. only	Wet	East	Unknown	Unknown	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

2018-Oct-26, Fri,13:38	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Oct-31, Wed,15:43	Rain	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Passenger van	Other motor vehicle

Location: MARCH RD @ TERRY FOX DR

Traffic Control: Tra	ffic signal				Total Collisions: 59				
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	er Vehicle type	First Event	No. Ped
2014-Jan-22, Wed,20:02	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Feb-06, Thu,13:54	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Apr-21, Mon, 15:17	Clear	Other	P.D. only	Dry	East	Turning right	Automobile, station wagon	Curb	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2014-Sep-30, Tue,20:42	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Turning right	Pick-up truck	Other motor vehicle	

2014-Oct-05, Sun,12:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Oct-06, Mon,09:10	Clear	Rear end	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle
2014-Nov-19, Wed,04:45	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile,	Other motor
							station wagon	vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014 Nov 24 Map 10:09	Dein	Deer and		\M/ot	North	Coing shood	Automobile	Other meter
2014-1100-24, 11011, 19.00	Kalli	Rear end	P.D. only	vvel	North	Going anead	station wagon	vehicle
					North	Slowing or stopping	g Passenger van	Other motor vehicle
2015-Jan-14, Wed,15:14	Clear	Rear end	P.D. only	Dry	North	Turning left	Passenger van	Other motor vehicle
_					North	Turning left	Automobile, station wagon	Other motor vehicle
2015- Jan-17, Sat 08:31	Clear	Rear end	P.D. only	lce	Fast	Slowing or stopping	n Automobile	Other motor
2010 001 17, 000,00.01	Cical		1.D. only	100	Lust	Clowing of Stopping	station wagon	vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-01, Sun,17:48	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle

2015-Apr-07, Tue,19:00	Clear	Rear end	Non-fatal injury	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
_					South	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jun-03, Wed,15:30	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile,	Other motor
					South	Turning right	station wagon Automobile,	vehicle Other motor
							station wagon	vehicle
2015-Jun-28, Sun,14:51	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	g Delivery van	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-13, Mon,10:34	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Jul-13, Mon,17:45	Clear	Turning movement	Non-fatal injury	Dry	South	Going ahead	Automobile,	Other motor
					North	Turning left	Automobile, station wagon	Other motor vehicle
2015-Aug-05, Wed,18:00	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2015-Sep-28, Mon,06:25	Clear	Turning movement	Non-fatal injury	Dry	East	Turning right	Automobile,	Other motor
		-		-			station wagon	vehicle
					East	Going ahead	Truck - dump	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle

2015-Oct-23, Fri,20:05	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2015-Oct-29, Thu,09:39	Rain	Rear end	P.D. only	Wet	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Dec-14, Mon,17:20	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-Jan-12, Tue,17:18	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Apr-05, Tue,08:26	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2016-Apr-14, Thu,07:40	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Pick-up truck	Other motor vehicle
2016-Jul-26, Tue, 16:23	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle

2016-Oct-02, Sun,13:23	Rain	Sideswipe	P.D. only	Wet	West	Turning left	Pick-up truck	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2016-Dec-14, Wed,11:30	Clear	Angle	P.D. only	Dry	South	Turning left	Automobile,	Other motor
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Dec-22, Thu,09:33	Snow	Sideswipe	P.D. only	Slush	North	Changing lanes	Automobile, station wagon	Skidding/sliding
					North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jan-08, Sun,14:48	Clear	Rear end	P.D. only	Wet	South	Turning right	Automobile,	Other motor
						5 5 5	station wagon	vehicle
					South	Turning right	Pick-up truck	Other motor vehicle
2017-Apr-24, Mon,14:47	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-May-18, Thu,09:47	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Truck and trailer	Other motor vehicle
2017-Jun-13, Tue,20:15	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle

2017-Jun-14, Wed,18:47	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2017-Jun-29, Thu,11:53	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Jul-24, Mon,15:37	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2017-Aug-24, Thu,17:49	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-03, Sun,10:39	Rain	Sideswipe	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle
2017-Sep-20, Wed,16:15	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Sep-27, Wed,14:43	Clear	Rear end	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2017-Oct-04, Wed,17:45	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Oct-14, Sat,08:00	Rain	SMV other	P.D. only	Wet	North	Merging	Automobile, station wagon	Curb
2017-Oct-20, Fri,19:04	Clear	Other	P.D. only	Dry	West	Reversing	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2017-Dec-02, Sat,18:19	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-19, Tue,08:32	Clear	SMV other	P.D. only	Loose snow	North	Turning right	Automobile, station wagon	Snowbank/drift
2017-Dec-27, Wed,14:55	Clear	SMV other	P.D. only	lce	South	Going ahead	Automobile, station wagon	Other
2018-Jan-14, Sun,12:37	Clear	Rear end	P.D. only	Ice	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jan-21, Sun,21:32	Clear	Angle	P.D. only	Dry	East	Reversing	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2018-Feb-09, Fri,23:12	Snow	Turning movement	Non-fatal injury	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2018-Feb-11, Sun,18:56	Freezing Rain	SMV other	P.D. only	Ice	East	Turning right	Automobile, station wagon	Skidding/sliding
2018-Feb-22, Thu,17:20	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2018-Feb-28, Wed,13:53	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	g Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jun-06, Wed,17:35	Clear	Rear end	P.D. only	Dry	North	Unknown	Motorcycle	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jun-09, Sat,17:11	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Curb
2018-Jun-22, Fri,15:38	Clear	Rear end	P.D. only	Dry	North	Turning right	Pick-up truck	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2018-Jul-14, Sat,11:41	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2018-Jul-24, Tue,09:30	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
_					East	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Nov-14, Wed,19:00	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile,	Other motor
						C C	station wagon	vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2018-Dec-18, Tue,08:59	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
_					South	Slowing or stopping	g Automobile, station wagon	Other motor vehicle
2018-Dec-21, Fri,16:20	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

Location: MARCH RD btwn SOLANDT RD & STATION RD

Traffic Control: No	control			Total Collisions: 25						
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	er Vehicle type	First Event	No. Ped	
2014-Mar-05, Wed, 14:40	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping Automobile, station wagon		Other motor vehicle		
					South	Slowing or stoppin	g Automobile, station wagon	Other motor vehicle		
2014-Mar-31, Mon,09:01	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle		
					North	Stopped	Pick-up truck	Other motor vehicle		
					North	Stopped	Automobile, station wagon	Other motor vehicle		

					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Jun-29, Sun,15:46	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Jul-08, Tue,17:15	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Sep-29, Mon,09:20	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2014-Oct-01, Wed,17:45	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle
2014-Nov-23, Sun,22:01	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Animal - wild
2014-Dec-01, Mon,09:15	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Passenger van	Other motor vehicle
2015-Feb-14, Sat,10:03	Clear	Other	Non-fatal injury	lce	North	Slowing or stopping	Automobile, station wagon	Curb
					South	Going ahead	Pick-up truck	Other motor vehicle

2015-Apr-05, Sun,21:02	Clear	SMV other	P.D. only	Dry	North	Making "U" turn	Fire vehicle	Pole (sign, parking meter)
2015-Jun-25, Thu,09:05	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-12, Sun,14:54	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Nov-25, Wed,17:20	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jan-07, Thu, 17:43	Clear	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jul-20, Wed,11:57	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2016-Aug-17, Wed,13:21	Clear	Turning movement	P.D. only	Dry	East	Turning right	Delivery van	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Aug-20, Sat,00:57	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle

					North	Slowing or stopping Automobile, station wagon		Other motor vehicle
2016-Dec-18, Sun,17:00	Clear	SMV other	P.D. only	lce	North	Going ahead	Automobile, station wagon	Curb
2017-Jan-12, Thu,08:55	Clear	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Passenger van	Other motor vehicle
2017-Mar-17, Fri,17:29	Clear	Rear end	P.D. only	Dry	North	Merging	Pick-up truck	Other motor vehicle
					North	Merging	Pick-up truck	Other motor vehicle
2017-Nov-15, Wed,06:28	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Animal - wild
2018-Mar-20, Tue,09:24	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Truck - closed	Other motor vehicle
2018-May-02, Wed,07:30	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-23, Thu,07:52	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

Location: MARCH RD btwn TERRY FOX DR & SOLANDT RD

Traffic Control: No control Total Collisions: 16										
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped	
2014-Jan-22, Wed,07:25	Clear	Rear end	P.D. only	Packed snow	South	Slowing or stopping	g Automobile, station wagon	Other motor vehicle		
					South	Stopped	Automobile, station wagon	Other motor vehicle		
2014-Sep-08, Mon,21:25	Clear	Angle	Non-fatal injury	Dry	South	Changing lanes	Motorcycle	Other motor vehicle		
					East	Turning right	Pick-up truck	Other motor vehicle		
2015-Jan-16, Fri,16:08	Clear	SMV other	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Skidding/sliding		
2015-Apr-13, Mon,07:29	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Skidding/sliding		
2015-May-09, Sat,13:17	Clear	SMV other	Non-fatal injury	Wet	South	Changing lanes	Motorcycle	Skidding/sliding		
2015-May-25, Mon,21:57	Rain	Sideswipe	Non-fatal injury	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle		
					South	Going ahead	Automobile, station wagon	Other motor vehicle		
2015-Nov-15, Sun,21:40	Clear	SMV other	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Animal - wild		
2015-Nov-15, Sun,23:58	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Animal - wild		

2016-Jan-15, Fri,17:54	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Jun-17, Fri,06:36	Clear	SMV other	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Animal - wild
2016-Jun-30, Thu,16:46	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Bicycle	Other motor vehicle
					East	Turning right	Pick-up truck	Cyclist
2016-Dec-19, Mon,23:58	Clear	Sideswipe	P.D. only	Loose snow	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2017-Feb-14, Tue,11:55	Snow	Rear end	Non-fatal injury	Wet	North	Merging	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-May-20, Sat,07:57	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jun-05, Mon,08:55	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

					South	Going ahead	Truck and trailer	Other motor vehicle
2018-Oct-30, Tue,17:12	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

Location: SOLANDT RD btwn MARCH RD & LEGGET DR

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuve	r Vehicle type	First Event	No. Ped
2018-Oct-02, Tue,16:24	Rain	Turning movement	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	



Appendix C - Excerpts from 2505-2707 Solandt TIA and KNUEA TMP





Figure 6: Site-Generated Traffic



Figure 7: Projected KNUEA Traffic





Appendix D- Existing and Background Conditions Output Data





Solandt TIA Existing 2019 AM 1: March Road & Terry Fox Drive

1: March Road & Terry Fox Drive										AM.syn		
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	17	**	1	**	***	1	3	***	1
Traffic Volume (vph)	89	511	244	69	133	40	274	365	169	324	950	137
Future Volume (vph)	89	511	244	69	133	40	274	365	169	324	950	137
Lane Group Flow (vph)	94	538	257	73	140	42	288	384	178	341	1000	144
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.2	31.8	31.8	10.8	28.8	28.8	18.9	43.0	43.0	30.9	55.0	55.0
Actuated g/C Ratio	0.09	0.24	0.24	0.08	0.22	0.22	0.15	0.33	0.33	0.24	0.42	0.42
v/c Ratio	0.33	0.66	0.47	0.27	0.19	0.10	0.61	0.24	0.30	0.86	0.49	0.21
Control Delay	59.0	47.7	7.1	58.1	39.3	0.4	59.6	36.2	12.0	69.6	30.6	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	47.7	7.1	58.1	39.3	0.4	59.6	36.2	12.0	69.6	30.6	5.1
LOS	E	D	Α	E	D	Α	E	D	В	E	С	A
Approach Delay		37.2			38.3			39.1			37.1	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	12.4	70.5	0.0	9.6	16.2	0.0	42.5	22.6	6.0	89.5	72.5	0.0
Queue Length 95th (m)	21.5	83.4	20.7	17.6	23.4	0.0	56.2	37.6	29.0	#176.8	99.1	14.1
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	300	980	600	300	980	532	525	1593	599	398	2038	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.55	0.43	0.24	0.14	0.08	0.55	0.24	0.30	0.86	0.49	0.21
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 114 (88%), Referenced to r	phase 2:NBT a	and 6:SBT.	Start of Gre	en								
Natural Cycle: 110												
Control Type: Actuated-Coordinate	ed											
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 37.7				Int	tersection L	OS: D						
Intersection Capacity Utilization 81	.9%			IC	U Level of S	Service D						
Analysis Period (min) 15												
# 95th percentile volume exceed Queue shown is maximum after	s capacity, qu r two cycles	eue may be	longer.									
Splits and Dhases: 1. March Do	ad & Torny For											
						6	10					<i>20</i>
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Ø1	🛡 🖉 2 (R)		
25 s	47 s	16 s 42 s	
1 Ø5	📕 🕈 Ø6 (R)	▲ Ø7 Ø8	
25 s	47 s	16 s 42 s	

Solandt TIA Existing 2019 AM 2: March Road & Solandt Road

2: March Road & Soland	dt Road											AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	5	*	1	ሻሻ	î,	5	**	1	5	**	1	
Traffic Volume (vph)	29	103	128	53	120	607	731	675	115	1078	133	
Future Volume (vph)	29	103	128	53	120	607	731	675	115	1078	133	
Lane Group Flow (vph)	31	108	135	56	159	639	769	711	121	1135	140	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases	-		Free	0	0	2	0	2	6	0	6	
Detector Phase	1	4		3	8	5	2	2	6	6	6	
Switch Phase	F 0	10.0		E 0	10.0	E 0	20.0	20.0	20.0	20.0	20.0	
Minimum Initial (S)	5.0 10.0	21.5		5.U 10.0	21.5	0.U 11.2	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	12.0	22.0		12.0	31.5	20.0	20.3	20.3	20.3	20.3	20.3	
Total Split (%)	10.0%	32.0 24.6%		10.0%	32.0 24.6%	30.0%	0.CO 65.4%	0.CO 65.4%	40.0	40.0 35.4%	40.0	
Yellow Time (s)	10.070	24.070		10.070	24.070	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	17	17	17	4.0	17	4.0	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-23	-23	-2.3	-2.3	-23	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	8.6	19.0	130.0	8.7	21.6	92.6	92.6	92.6	42.0	42.0	42.0	
Actuated g/C Ratio	0.07	0.15	1.00	0.07	0.17	0.71	0.71	0.71	0.32	0.32	0.32	
v/c Ratio	0.28	0.42	0.09	0.26	0.55	0.97	0.32	0.57	0.59	1.05	0.25	
Control Delay	64.3	53.9	0.1	60.6	53.6	41.0	2.7	4.1	30.2	66.8	1.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	53.9	0.1	60.6	53.6	41.0	2.7	4.1	30.2	66.8	1.7	
LOS	E	D	A	E	D	D	A	A	С	E	A	
Approach Delay		28.6			55.4		14.7			57.1		
Approach LOS Queue Length 50th (m)	Q 1	26.8	0.0	7.5	38/	~164.7	28.0	17.0	11.0	~175.6	0.0	
Queue Length 95th (m)	18.0	12 /	0.0	1/ 8	57.8	m#205.8	20.0 m15.6	m11.9	16.7	#216.1	0.0	
Internal Link Dist (m)	10.5	90.1	0.0	14.0	43.7	111#200.0	219.9	11111.2	10.7	189.4	0.0	
Turn Bay Length (m)		50.1	60.0		40.7	160.0	210.0		150 0	105.4	70.0	
Base Capacity (vph)	116	380	1478	225	373	658	2388	1239	205	1083	558	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.27	0.28	0.09	0.25	0.43	0.97	0.32	0.57	0.59	1.05	0.25	
Intersection Summary												
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 15 (12%), Referenced to pha Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.05 Intersection Signal Delay: 32.6 Intersection Capacity Utilization 95.4 Analysis Period (min) 15 Volume exceeds capacity, queu Queue shown is maximum after	ase 2:NBTL a d 8% ie is theoretic two cycles	and 6:SBTL, ally infinite.	Start of Gr	reen In IC	tersection U Level of	LOS: C Service F						
# 95th percentile volume exceeds Queue shown is maximum after m Volume for 95th percentile quer	two cycles. ue is metered	eue may be I by upstrea	longer. m signal.									
Splits and Phases: 2: March Road	d & Solandt F	Road						<u> </u>				10
1 Ø2 (R)							1	Ø3	Ø	4		



Solandt TIA Existing 2019 AM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	*	1.	3	ţ,	3	ţ,	3	1.	
Traffic Volume (vph)	429	143	2	14	99	179	32	184	
Future Volume (vph)	429	143	2	14	99	179	32	184	
Lane Group Flow (vph)	452	402	2	21	104	240	34	250	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	
Protected Phases		2		6		8		4	
Permitted Phases	2		6		8		4		
Detector Phase	2	2	6	6	8	8	4	4	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	
Act Effct Green (s)	27.6	27.6	17.7	17.7	17.4	17.4	17.4	17.4	
Actuated g/C Ratio	0.51	0.51	0.33	0.33	0.32	0.32	0.32	0.32	
v/c Ratio	0.68	0.46	0.01	0.04	0.33	0.43	0.11	0.45	
Control Delay	15.9	7.6	12.0	10.8	20.3	18.4	17.1	18.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I otal Delay	15.9	7.6	12.0	10.8	20.3	18.4	1/.1	18.5	
LUS	В	A	В	40 O	C	40 O	В	40 A	
Approach Delay		12.0		10.9		18.9		18.4	
Approach LOS	07.7	10 T	0.0	B 1 1	70	16 D	0.0	17 O	
Queue Length 50th (m)	Z1.1 74.0	10.7	0.2	1.1	1.3	10.3	2.Z 10.2	17.0 E0.0	
Queue Length 95th (m)	74.Z	40.0	1.0	3.9 160.9	20.0	40.1	10.5	214.4	
Turn Roy Longth (m)		02.0	45.0	109.0	70.0	200.2	40.0	214.4	
Pase Capacity (vph)	12/0	1511	770	1500	70.0	1370	796	1380	
Starvation Can Reductn	1240	0	0	1399	0	1372	100	1300	
Spillback Can Reductin	0	0	0	0	0	0	0	0	
Storage Can Reductin	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.27	0.00	0.01	0.13	0.17	0.04	0.18	
Intersection Summary									
Cycle Length: 112.4									
Actuated Cycle Length: 53 7									
Natural Cycle: 60									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.68									
Intersection Signal Delay: 14.8				Ini	tersection L	OS' B			
Intersection Capacity Utilization 64.29	%			IC	U Level of S	Service C			
Analysis Period (min) 15	,0			10	0 20101 01 0				
Splits and Phases: 3: Legget Drive	& Solandt	Road							
									3.
66.2 s						46	2s		

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56.2 s	46.2 s
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Solandt TIA Existing 2019 AM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		aî.	1	1	**	1	55	**	1
Traffic Volume (vph)	63	26	9	37	12	175	87	1907	83	316	919	123
Future Volume (vph)	63	26	9	37	12	175	87	1907	83	316	919	123
Lane Group Flow (vph)	0	93	9	0	52	184	92	2007	87	333	967	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.6	19.6		19.6	19.6	14.8	78.7	78.7	19.7	83.6	83.6
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.11	0.61	0.61	0.15	0.64	0.64
v/c Ratio		0.47	0.03		0.27	0.49	0.48	0.99	0.10	0.68	0.45	0.14
Control Delay		55.8	0.2		49.0	10.1	61.9	43.6	3.5	77.3	8.7	2.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.8	0.2		49.0	10.1	61.9	43.6	3.5	77.3	8.7	2.9
LOS		E	A		D	В	E	D	A	E	A	A
Approach Delay		50.9			18.7			42.7			24.2	
Approach LOS		D	0.0		B	0.0	00.0	D	0.4	11.0	C	
Queue Length 50th (m)		23.9	0.0		13.0	0.0	23.6	256.2	0.1	44.0	1.4	0.0
Queue Length 95th (m)		35.3	0.0		22.0	18.2	40.9	#392.3	9.1	M35.6	m139.8	m14.9
Internal Link Dist (m)		128.6	20.0		308.2	50.0	05.0	130.8	70.0	100.0	353.3	05.0
Page Canadity (umb)		260	30.0		260	50.0	95.0	2020	/0.0	190.0	0156	25.0
Storyotion Con Bodyoth		300	409		300	540	233	2030	901	500	2100	952
Stal valion Cap Reductin		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductin		0	0		0	0	0	0	0	0	0	0
Boducod v/o Patio		0.25	0.02		0 1/	0.34	0.30	0 00	0 10	0.67	0.45	0 14
		0.25	0.02		0.14	0.04	0.39	0.99	0.10	0.07	0.45	0.14
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130	0.1157											
Offset: 68 (52%), Referenced to pha	ase 2:NB1 ar	nd 6:SBT, S	tart of Gree	n								
Natural Cycle: 145	1											
Control Type: Actuated-Coordinated	1											
Maximum V/c Ratio: 0.99				l e i	Laura attaur I.	00.0						
Intersection Signal Delay: 34.8	70/			In	tersection L							
Intersection Capacity Utilization 90.7	%			IC	U Level of a	Service E						
Analysis Period (min) 15	oonooitu ou	awa mawha	longor									
95th percentile volume exceeds	capacity, qu	eue may be	longer.									
m Volume for 95th percentile queu	ue is metered	d by upstrea	ım signal.									
Splits and Phases: 4: March Road	d & Carling A	venue										
Ø1	Ø2 (R)							40	14			26
22 4								40				

Ø1	Ø2 (R)	
22 s	68 s	40 s
Ø5	🛛 🗘 🖉 Ø6 (R)	● Ø8
22 s	68 s	40 s

Solandt TIA Existing 2019 PM 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										PM.syn
	٨	+	1	4	Ŧ	*	1	1	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	55	**	1	55	**	1	ሻሻ	***	1	ň	***	1
Traffic Volume (vph)	233	149	402	202	364	319	283	1322	107	53	527	106
Future Volume (vph)	233	149	402	202	364	319	283	1322	107	53	527	106
Lane Group Flow (vph)	245	157	423	213	383	336	298	1392	113	56	555	112
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	19.0	42.0	42.0	19.0	42.0	42.0	21.0	38.0	38.0	21.0	38.0	38.0
Total Split (%)	15.8%	35.0%	35.0%	15.8%	35.0%	35.0%	17.5%	31.7%	31.7%	17.5%	31.7%	31.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.6	30.5	30.5	14.3	30.3	30.3	16.6	49.4	49.4	12.3	42.5	42.5
Actuated g/C Ratio	0.12	0.25	0.25	0.12	0.25	0.25	0.14	0.41	0.41	0.10	0.35	0.35
V/c Ratio	0.62	0.18	0.69	0.55	0.45	0.59	0.66	0.70	0.16	0.33	0.33	0.18
Control Delay	57.4	33.5	14.9	55.4	38.4	10.8	56.9	21.4	2.0	54.2	31.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	57.4	33.5	14.9	55.4	38.4	10.8	56.9	21.4	2.0	54.2	31.0	2.1
LUS Arease als Dalau	E	24.4	В	E	D 20.0	В	E	0 00	А	D	00.0	A
Approach Delay		31.1			32.3			20.0			28.3	
Approach LOS	20.0	116	17 /	25 0	20 /	0.1	20.1	126.6	26	10.1	40.9	0.0
Queue Longth 95th (m)	30.0	14.0	52.0	20.0	52.6	9.1 35.7	JZ.1	#150.0	2.0 m/ 1	25.0	40.0 52.4	0.0
Internal Link Dist (m)	44.0	1/1 2	JZ.9	50.0	123.6	55.7	11141.1	170.0	1114.1	23.9	975 A	4.5
Turn Bay Length (m)	105.0	141.2	60.0	60.0	123.0	75.0	160.0	119.2	85.0	105.0	21 J.4	100.0
Base Canacity (yph)	406	1061	680	406	1061	648	462	1081	688	237	1707	614
Starvation Can Reductn	400	0	000	-00	0	0+0	-02	0	000	201	0	014
Spillback Can Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Can Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0 15	0.62	0.52	0.36	0.52	0 65	0 70	0 16	0.24	0.33	0 18
	0.00	0.10	0.02	0.02	0.00	0.02	0.00	0.10	0.10	0.21	0.00	0.10
Cycle Length: 120 Actuated Cycle Length: 120 Offset: 72 (60%), Referenced to ph Natural Cycle: 100 Control Type: Actuated-Coordinate Maximum v/c Ratio: 0.70 Intersection Signal Delay: 28.7 Intersection Capacity Utilization 73 Analysis Period (min) 15 # 95th percentile volume exceed: Queue shown is maximum after m Volume for 95th percentile que Splits and Phases: 1: March Roa	nase 2:NBT a ad .8% s capacity, qu r two cycles. eue is metere ad & Terry Fo	nd 6:SBT, S reue may be d by upstrea x Drive	Start of Gree e longer. am signal.	in In IC	tersection L U Level of S	OS: C Service D						
•ø1	Ø2 (R)				6	3	-	04				
21 s 38	s				19 s	-	42 9	5				
							4	*				1.1.1.1.1.1.5

Ø1	02 (R)	√ Ø3	₩ Ø4	
21s	38 s	19 s	42 s	
1 Ø5	Ø6 (R)	▶ Ø7	Ø8	
21 s	38 s	19 s	42 s	

Solandt TIA Existing 2019 PM 2: March Road & Solandt Road

	۶	→	7	4	+	1	1	1	1	ŧ	4	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	*	*	1	**	t.	7	**	1	*	**	1	
Traffic Volume (vph)	87	41	645	613	68	121	1533	66	37	863	68	
Future Volume (vph)	87	41	645	613	68	121	1533	66	37	863	68	
Lane Group Flow (vph)	92	43	679	645	259	127	1614	69	39	908	72	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	29.0	32.0		29.0	32.0	12.0	59.0	59.0	47.0	47.0	47.0	
Total Split (%)	24.2%	26.7%		24.2%	26.7%	10.0%	49.2%	49.2%	39.2%	39.2%	39.2%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	C Mari	C Mau	Yes	Yes	Yes	
	None	None	100.0	None	None	None		C-Max	C-Max	C-Max	C-Max	
Act Effect Green (s)	13.8	16.1	120.0	25.1	24.1	70.1	70.1	70.1	55.4	55.4	55.4	
Actuated g/C Ratio	0.12	0.13	1.00	0.21	0.20	0.58	0.50	0.00	0.40	0.40	0.40	
V/C Rallo	0.40	0.10	0.40	0.95	0.00	0.41	0.02	0.00	0.03	0.59	0.10	
	0.0	45.0	1.0	0.0	0.0	9.0	14.4	0.2	0.00	22.3	3.9 0.0	
Total Dolay	57.2	45.6	1.0	71.1	23.7	0.0	14.4	0.0	0.0	22.2	3.0	
	57.2	4J.0	1.0	/ I. I E	55.7	9.0 A	14.4 R	0.2	00.0 E	22.5	J.9 A	
Approach Delay	L	97	A	L	60.4	A	13.5	~	L	22.7	~	
Approach LOS		Δ			00.4 F		10.0 R			22.1 C		
Queue Length 50th (m)	217	99	0.0	82.0	36.2	46	81.4	0.0	70	83.8	22	
Queue Length 95th (m)	37.6	18.7	0.0	#119.1	59.1	m8.4	#273.7	m0.0	m#26.3	133.4	m7.0	
Internal Link Dist (m)	01.0	90.1	0.0	#110.1	43.7	110.1	219.9	110.0	110/20.0	189.4		
Turn Bay Length (m)			60.0			160.0	2.0.0		150.0		70.0	
Base Capacity (vph)	349	411	1477	680	454	310	1959	897	62	1548	746	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.26	0.10	0.46	0.95	0.57	0.41	0.82	0.08	0.63	0.59	0.10	
Intersection Summary												
Cycle Length: 120 Actuated Cycle Length: 120 Offset: 21 (18%), Referenced to ph: Natural Cycle: 120 Control Type: Actuated-Coordinater	ase 2:NBTL a	and 6:SBTL,	, Start of G	reen								
Maximum v/c Ratio: 0.95												
Intersection Signal Delay: 24.2				Int	tersection L	OS: C						
Intersection Capacity Utilization 104	1.4%			IC	U Level of S	Service G						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
Queue shown is maximum after m Volume for 95th percentile que	two cycles. ue is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Roa	d & Solandt I	Road	- 0									
		Vau			6	2			-			1
11Ø2 (R) ♥ 59 s					▼ Ø. 29 s	3		3	-104 2 s			
1 I												

PM.syn

Solandt TIA Existing 2019 PM 3: Legget Drive & Solandt Road

Lane Group EBL EBT WBL WBT NBL NBT SBL SBT Lane Complex (oph) 56 10 44 146 290 106 3 246 Lature Volume (oph) 56 10 44 146 290 106 3 246 Lature Soup (oph) 59 68 44 146 290 106 3 246 Lane Comp Pow (oph) 56 10 44 146 290 106 3 246 Lane Comp Pow (oph) 56 10 44 146 290 106 3 242 Deletol Phase 2 6 6 8 4 4 44 Winture (s) 212 212 252 252 112 212 77.4 46.2 462 Total Split (r) 34.7% 34.7% 34.7% 24.7% 26.3% 65.3% 30.3 3 33 33 33 33 3		٠	+	4	Ŧ	1	Ť	1	Ļ	
Lare Configurations Traffic Volume (vph) S	Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Traffic Volume (vph) 56 10 44 146 290 106 3 246 Future Volume (vph) 56 10 44 146 290 106 3 246 Future Volume (vph) 59 68 46 163 305 115 3 728 Turn Type Perm NA Perm NA pri-pt NA Perm NA Protected Phases 2 6 8 8 4 Permited Phases 2 6 6 3 8 4 4 Permited Phases 2 2 6 6 3 8 4 4 Switch Phase 4 Switch Than (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	Lane Configurations	×	1.	*	1.	*	1.	*	1.	
Future Volume (ph) 59 68 10 44 146 290 106 3 246 27 15 3 728 11 728 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Traffic Volume (vph)	56	10	44	146	290	106	3	246	
Lame Group Flow (right) 59 68 46 183 305 115 3 723 Turn Type Perm NA Perm NA Perm NA Perm NA Permited Phases 2 6 8 4 4 Detector Phase 2 2 6 8 4 4 Switch Phase 2 2 6 6 3 8 4 4 Minimum Split (s) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 Minimum Split (s) 41.2 41.2 41.2 24.12 25.2 25.2 25.2 11.2 25.2 25.2 25.2 11.5 3.3	Future Volume (vph)	56	10	44	146	290	106	3	246	
Type Perm NA Perm NA Perm NA Perm NA Protected Phases 2 6 3 8 4 Protected Phases 2 2 6 3 8 4 Permited Phases 2 2 6 3 8 4 Detector Phase 2 2 6 6 3 8 4 Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 10.0 Minimum Shit (s) 25.2	Lane Group Flow (vph)	59	68	46	163	305	115	3	728	
Data Parameter Prime Data Prime Data Prime Data Prime Data Prime Data Prime Prime Data Prime Prim Prime Prim <t< td=""><td></td><td>Perm</td><td>NA</td><td>Perm</td><td>NA</td><td>nm+nt</td><td>NA</td><td>Perm</td><td>NA</td><td></td></t<>		Perm	NA	Perm	NA	nm+nt	NA	Perm	NA	
Answer Image Image <t< td=""><td>Protected Phases</td><td>T OIIII</td><td>2</td><td>i onn</td><td>6</td><td>3</td><td>8</td><td>T OIIII</td><td>4</td><td></td></t<>	Protected Phases	T OIIII	2	i onn	6	3	8	T OIIII	4	
Timese 2 0 6 3 8 4 4 Switch Phase Switch Phase 10.0<	Permitted Phases	2	2	6	U	8	U	1	т	
Detaction Tradee 1 1 0 0 3 0 4 4 Minimum Initial (s) 10.0 10.0 10.0 5.0 10.0 10.0 10.0 Minimum Initial (s) 10.0 10.0 10.0 5.0 10.0 10.0 10.0 Total Split (%) 34.7%	Detector Phase	2	2	6	6	3	8	4	1	
AndLif riske 10.0 10.0 10.0 5.0 10.0 10.0 Minimum Split (s) 25.2 25.2 25.2 11.2 25.2 25.2 25.2 Total Split (s) 34.7% 34.7% 34.7% 34.7% 33.3 33	Switch Phase	2	2	0	0	5	U	-	-	
Minimum and (s) Yoo	Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	
Minimulary (a) 23.2 23.2 23.2 11.2 23.2 23.2 23.2 23.2 Total Spiit (%) 34.7% 34.7% 34.7% 34.7% 34.7% 33.3	Minimum Solit (c)	25.2	25.2	25.2	25.2	11.0	25.2	25.2	25.2	
Udai apint (s) 41.2 41.2 41.2 51.2 71.4 41.2 30.2 Viela Spint (%) 34.7% <td>Total Split (a)</td> <td>23.2</td> <td>ZJ.Z 41.0</td> <td>ZJ.Z</td> <td>ZJ.Z</td> <td>21.2</td> <td>ZJ.Z 77 /</td> <td>20.2</td> <td>ZJ.Z 46.0</td> <td></td>	Total Split (a)	23.2	ZJ.Z 41.0	ZJ.Z	ZJ.Z	21.2	ZJ.Z 77 /	20.2	ZJ.Z 46.0	
Under Sprift GH / N GH / N QH / N	Total Split (%)	41.Z	41.Z	41.Z	41.Z	21.Z	65.20/	40.Z	40.Z	
Tellow Inne (s) 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.		34.7%	34.7%	34.7%	34.7%	20.3%	00.3%	39.0%	39.0%	
Market limit (s) 2.9 2.9 2.9 2.9 2.9 2.9 2.9 Itel Time Aglist (b) -2.2 -2.4 -2.0 -2.0	Tellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
Loss I ime Adjusci (s) -2.2 <	All-red Time (S)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
lotal LoS Lead/Lag L	Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Lead-Lag Optimize? Yes Yes Yes Recall Mode None None None None None None None Non	I otal Lost I ime (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Ves Yes Yes Yes Recall Mode None None <td< td=""><td>Lead/Lag</td><td></td><td></td><td></td><td></td><td>Lead</td><td></td><td>Lag</td><td>Lag</td><td></td></td<>	Lead/Lag					Lead		Lag	Lag	
Near None	Lead-Lag Optimize?					Yes		Yes	Yes	
Act Ett Green (s) 16.2 16.2 16.2 16.2 56.2 55.5 42.5 Actuated g/C Ratio 0.18 0.18 0.18 0.18 0.62 0.61 0.47 0.47 v/c Ratio 0.37 0.22 0.21 0.52 0.68 0.11 0.01 0.93 Control Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 Los D B D D C A B D Queue Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 LOS D B D D C A B D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 50th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Immal Link Dist (m) 82.0 162.2 75.8 1434 546 781 Starvation Cap Reductn 0	Recall Mode	None	None	None	None	None	None	None	None	
Actuated g/C Ratio 0.18 0.18 0.18 0.18 0.18 0.18 0.62 0.61 0.47 0.47 0.47 0.47 0.6 0.37 0.22 0.21 0.52 0.68 0.11 0.01 0.93 Control Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Act Effct Green (s)	16.2	16.2	16.2	16.2	56.2	55.5	42.5	42.5	
wic Ratio 0.37 0.22 0.21 0.52 0.68 0.11 0.01 0.93 Control Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 LOS D B D C A B D Approach Delay 26.2 38.9 21.6 42.3 Approach LOS C D C D D C D S S D </td <td>Actuated g/C Ratio</td> <td>0.18</td> <td>0.18</td> <td>0.18</td> <td>0.18</td> <td>0.62</td> <td>0.61</td> <td>0.47</td> <td>0.47</td> <td></td>	Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.62	0.61	0.47	0.47	
Control Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 LOS D B D D C A B D Approach LOS C D C D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 0 Reduced vic Ratio 0.16 0.10 0.09 0.22 0.53 0.08 0.01 0.93 Intersection Summary Cycle Length: 91.5 A Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum Vic Ratio 0.9 Intersection Capacity Utilization 91.0% Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum Vic Ratio 0.9 Intersection Capacity Utilization 91.0% Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum Vic Ratio 0.93 Intersection Capacity Utilization 91.0% Maximum Vic Ratio 1.093 Intersection Capacity Utilization 91.0% # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	v/c Ratio	0.37	0.22	0.21	0.52	0.68	0.11	0.01	0.93	
Queue Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 LOS D B D D C A B D Approach Delay 26.2 38.9 21.6 42.3 Approach LOS C D C D D Queue Length 50th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 214.4 Turm Bay Length (m) 45.0 70.0 40.0 828 206.2 214.4 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 0 Starvation Cap Reductn 0 <td>Control Delay</td> <td>40.6</td> <td>13.6</td> <td>35.1</td> <td>39.9</td> <td>26.8</td> <td>7.9</td> <td>16.7</td> <td>42.4</td> <td></td>	Control Delay	40.6	13.6	35.1	39.9	26.8	7.9	16.7	42.4	
Total Delay 40.6 13.6 35.1 39.9 26.8 7.9 16.7 42.4 LOS D B D D C A B D Approach LOS C D C D C D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 214.4 Tum Bay Length (m) 45.0 70.0 40.0 45.6 781 Starvation Cap Reductn 0 0 0 0 0 0 0 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <t< td=""><td>Queue Delay</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>0.0</td><td>0.0</td><td></td></t<>	Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LOS D B D D C A B D Approach Delay 26.2 38.9 21.6 42.3 Approach LOS C D C D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 10.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reducth 0 0 0 0 0 0 0 Storage Cap Reducth 0	Total Delay	40.6	13.6	35.1	39.9	26.8	7.9	16.7	42.4	
Approach Delay 26.2 38.9 21.6 42.3 Approach LOS C D C D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0	LOS	D	В	D	D	С	A	В	D	
Approach LOS C D C D Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Turn Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0	Approach Delay		26.2		38.9		21.6		42.3	
Queue Length 50th (m) 9.4 1.7 7.1 26.2 27.1 4.8 0.3 105.6 Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Um Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 Spilback Cap Reductn 0 0 0 0 0 0 0 Starvation Cap Reductn 0 0 0 0 0 0 0 Starvation Cap Reductn 0 0 0 0 0 0 0 0 Starvation Cap Reductn 0 0.01 0.09 0.22 0.53 0.08 0.01 0.93 Intersection Summary 20/24 20/24 10/24 10/24 10/24 10/24 10/24 10/24	Approach LOS		С		D		С		D	
Queue Length 95th (m) 23.4 13.4 18.4 50.1 61.4 11.7 2.3 #231.6 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Turn Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reducth 0 0 0 0 0 0 0 0 Spillback Cap Reducth 0 0 0 0 0 0 0 Storage Cap Reducth 0 0 0 0 0 0 0 0 Storage Cap Reducth 0 0 0 0 0 0 0 Storage Cap Reducth 0 0.16 0.10 0.09 0.22 0.53 0.08 0.01 0.93 Intersection Summary Exection LOS: C Exection LOS: C <t< td=""><td>Queue Length 50th (m)</td><td>9.4</td><td>1.7</td><td>7.1</td><td>26.2</td><td>27.1</td><td>4.8</td><td>0.3</td><td>105.6</td><td></td></t<>	Queue Length 50th (m)	9.4	1.7	7.1	26.2	27.1	4.8	0.3	105.6	
Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 0 Starvation Cap Reductn 0 <t< td=""><td>Queue Length 95th (m)</td><td>23.4</td><td>13.4</td><td>18.4</td><td>50.1</td><td>61.4</td><td>11.7</td><td>2.3</td><td>#231.6</td><td></td></t<>	Queue Length 95th (m)	23.4	13.4	18.4	50.1	61.4	11.7	2.3	#231.6	
Turn Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Reduced v/c Ratio 0.16 0.10 0.09 0.22 0.53 0.08 0.01 0.93 Intersection Summary Intersection Summary View Length: 118.6 Actuated Cycle Length: 118.6 Actuated Cycle: 90 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection LOS: 0 Intersection LOS: C Intersection LOS: C Intersection LOS: C Analysis Period (min) 15 # 951 percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Internal Link Dist (m)		82.0		169.8		205.2		214.4	
Base Capacity (vph) 374 651 512 725 578 1434 546 781 Starvation Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 Storage Cap Reductn 0 <td>Turn Bay Length (m)</td> <td></td> <td></td> <td>45.0</td> <td></td> <td>70.0</td> <td></td> <td>40.0</td> <td></td> <td></td>	Turn Bay Length (m)			45.0		70.0		40.0		
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td>374</td> <td>651</td> <td>512</td> <td>725</td> <td>578</td> <td>1434</td> <td>546</td> <td>781</td> <td></td>	Base Capacity (vph)	374	651	512	725	578	1434	546	781	
Spillback Cap Reductin 0 <td>Starvation Cap Reductn</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td>	Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductin 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio 0.16 0.10 0.09 0.22 0.53 0.08 0.01 0.93 Intersection Summary Cycle Length: 118.6 Actuated Cycle : 90 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection LOS: C Intersection Capacity Utilization 91.0% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Storage Cap Reductn	0	0	0	0	0	0	0	0	
Intersection Summary Cycle Length: 118.6 Actuated Cycle Length: 90.5 Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum v/c Ratic: 0.93 Intersection Signal Delay: 34.6 Intersection Capacity Utilization 91.0% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Reduced v/c Ratio	0.16	0.10	0.09	0.22	0.53	0.08	0.01	0.93	
Cycle Length: 118.6 Actuated Cycle Length: 90.5 Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection Capacity Utilization 91.0% Intersection Capacity Utilization 91.0% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road		0.1.0	0.110	0.00	0.22	0.00	0100	0101	0.00	
Actuated Cycle Length: 90.5 Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection Capacity Utilization 91.0% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Cycle Length: 119 6									
Natural Cycle: 90 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection Capacity Utilization 91.0% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Actuated Cycle Length: 00 F									
Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection Capacity Utilization 91.0% Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Notural Cycle: 00									
Maximum v/c Ratio: 0.93 Intersection Signal Delay: 34.6 Intersection LOS: C Intersection Capacity Utilization 91.0% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Control Type: Som: Act Unseerd									
Intersection Signal Delay: 34.6 Intersection LOS: C Intersection Capacity Utilization 91.0% ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Maximum v/a Datia: 0.02									
Intersection EQS: C Intersection EQS: C ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Interpretion Cignal Delay 24.0				1.	toroootine !	00.0			
ICU Level of Service F Analysis Period (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Intersection Signal Delay: 34.6	,			In	tersection L				
Analysis Penod (min) 15 # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Intersection Capacity Utilization 91.0%	D			IC	U Level of S	Service F			
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	Analysis Period (min) 15									
Queue shown is maximum after two cycles. Splits and Phases: 3: Legget Drive & Solandt Road	# 95th percentile volume exceeds ca	apacity, qu	eue may be	e longer.						
Splits and Phases: 3: Legget Drive & Solandt Road	Queue shown is maximum after two	o cycles.								
	Colite and Dhases - 2. Lawret D	0 Colorell	Dood							
	Splits and Phases: 3: Legget Drive	& Solandt	коаа							
VIT VIT	- Ø2			03			1000	¥ 04		

ø₂	1 Ø3		
41.2 s	31.2 s	46.2 s	
₹ø6	Ø8		
41.2 s	77.4s		

PM.syn

Solandt TIA Existing 2019 PM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		÷.	1		÷.	1	1	**	1	ሻሻ	**	1
Traffic Volume (vph)	26	13	30	120	19	317	33	1351	35	291	1861	50
Future Volume (vph)	26	13	30	120	19	317	33	1351	35	291	1861	50
Lane Group Flow (vph)	0	41	32	0	146	334	35	1422	37	306	1959	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase	40.0	40.0	40.0	40.0	40.0	40.0	5.0	00.0	00.0	5.0	00.0	00.0
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	62.0	62.0	18.0	62.0	62.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	15.0%	51.7%	51.7%	15.0%	51.7%	51.7%
Yellow Time (s)	3.7	3./	3.7	3.7	3.7	3.7	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (S)	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.1	-2.0	-2.0	-2.1	-2.0	-2.0
Lood/Log		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead Lag Optimize?							Leau	Lag	Lag	Leau	Lag	Lag
	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effet Green (s)	NOTE	22.7	22.7	NONE	22.9	22.9	10.7	67 A	67 A	17.7	0-iviax 79 5	79 5
Actuated a/C Ratio		0 19	0.19		0.19	0.19	0.09	07.4	07.4	0.15	0.66	0.66
v/c Ratio		0.15	0.15		0.15	0.15	0.03	0.30	0.00	0.13	0.00	0.00
Control Delay		38.3	0.5		53 1	27.9	53.9	24.9	0.01	52.3	30.7	2.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		38.3	0.5		53.1	27.9	53.9	24.9	0.1	52.3	30.7	2.9
LOS		D	А		D	С	D	C	A	D	С	A
Approach Delay		21.7			35.6			25.0			32.9	
Approach LOS		С			D			С			С	
Queue Length 50th (m)		8.7	0.0		33.8	31.9	8.2	136.4	0.0	38.9	264.2	0.1
Queue Length 95th (m)		16.6	0.0		49.0	58.4	18.5	197.1	0.0	m50.9	m#357.0	m2.7
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		411	507		383	582	195	1884	867	479	2222	992
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.38	0.57	0.18	0.75	0.04	0.64	0.88	0.05
Intersection Summary												
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 96 (80%), Referenced to pha	ase 2:NBT ar	nd 6:SBT, S	tart of Gree	n								
Natural Cycle: 125												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.88						~~ ~						
Intersection Signal Delay: 30.3				In	tersection L	OS: C						
Intersection Capacity Utilization 84.0)%			IC	U Level of S	Service E						
Analysis Period (min) 15			I									
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
m Volume for 95th percentile queu	wo cycles. Je is metered	d by upstrea	ım signal.									
Splits and Phases: 4: March Road	d & Carling A	venue										
	2 (R)							404				
18 s 62 s							4	0 s				

Ø1	Ø2 (R)	₩ Ø4
18 s	62 s	40 s
1 Ø5	Ø6 (R)	₽ Ø8
18 s	62 s	40 s

Solandt TIA Background 2021 AM 1: March Road & Terry Fox Drive

: March Road & Terry Fox Drive AM.syn												
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	**	**	1	**	***	1	×.	***	1
Traffic Volume (vph)	105	537	289	70	137	56	281	532	169	373	1303	178
Future Volume (vph)	105	537	289	70	137	56	281	532	169	373	1303	178
Lane Group Flow (vph)	111	565	304	74	144	59	296	560	178	393	1372	187
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.5	32.5	32.5	10.8	29.3	29.3	19.1	43.0	43.0	30.3	54.2	54.2
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.33	0.33	0.23	0.42	0.42
v/c Ratio	0.39	0.68	0.52	0.27	0.19	0.13	0.62	0.35	0.30	1.01	0.68	0.26
Control Delay	59.9	47.9	7.2	58.1	39.1	0.6	59.1	39.9	13.8	97.6	35.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	47.9	7.2	58.1	39.1	0.6	59.1	39.9	13.8	97.6	35.3	5.2
LOS	E	D	A	E	D	A	E	D	В	F	D	A
Approach Delay		36.6			36.0			40.9			45.0	
Approach LOS	447	D	0.0	0.7	D	0.0	40.7	D	0.7	445.0	D	0.0
Queue Length 50th (m)	14.7	73.9	0.0	9.7	16.5	0.0	43.7	33.4	0./	~115.8	112.4	0.0
Queue Length 95th (m)	24.7	0.88	22.7	17.7	24.0	0.0	57.9	55.8	33.1	#209.3	147.0	16.9
Internal LINK Dist (m)	105.0	141.2	CO 0	CO 0	123.6	75.0	400.0	179.2	05.0	405.0	275.4	100.0
Tum Bay Length (m)	105.0	000	00.0	00.0	000	/ 5.0	160.0	1500	0.08	105.0	0000	100.0
Starvation Can Baduata	300	980	034	300	980	532	525	1593	599	390	2008	107
Starvation Cap Reducts	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductin	0.37	0.58	0 48	0.25	0 15	0 11	0 56	0.35	0.30	1 01	0 68	0.26
	0.37	0.00	0.40	0.25	0.15	0.11	0.00	0.55	0.50	1.01	0.00	0.20
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 114 (88%), Referenced to pha	ase 2:NBT a	and 6:SBT,	Start of Gre	en								
Natural Cycle: 110												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.01												
Intersection Signal Delay: 41.5				Int	tersection L	OS: D						
Intersection Capacity Utilization 85.09	%			IC	U Level of S	Service E						
Analysis Period (min) 15												
 Volume exceeds capacity, queue 	is theoretic	ally infinite.										
Queue shown is maximum after to	vo cycles.											
# 95th percentile volume exceeds of	capacity, qu	eue may be	longer.									
Queue shown is maximum after tv	wo cycles.											
Splits and Phases: 1: March Road	& Terry Fo	x Drive										

Ø1	🖡 🕇 Ø2 (R)	√ Ø3	₩04
25 s	47 s	16 s	42 s
1 Ø5	Ø6 (R)	▶ Ø7	▲ Ø8
25 s	47 s	16 s	42 s

Solandt TIA Background 2021 AM 2: March Road & Solandt Road

2: March Road & Solan	dt Road											AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	3	*	1	2	ţ,	7	**	1	7	**	1	
Traffic Volume (vph)	29	110	129	63	121	607	898	739	158	1434	133	
Future Volume (vph)	29	110	129	63	121	607	898	739	158	1434	133	
Lane Group Flow (vph)	31	116	136	66	167	639	945	778	166	1509	140	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	13.0	32.0		13.0	32.0	39.0	85.0	85.0	46.0	46.0	46.0	
Total Split (%)	10.0%	24.6%		10.0%	24.6%	30.0%	65.4%	65.4%	35.4%	35.4%	35.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	8.6	19.5	130.0	8.8	22.1	92.1	92.1	92.1	42.0	42.0	42.0	
Actuated g/C Ratio	0.07	0.15	1.00	0.07	0.17	0.71	0.71	0.71	0.32	0.32	0.32	
v/c Ratio	0.28	0.44	0.09	0.30	0.56	0.98	0.40	0.63	0.97	1.39	0.25	
Control Delay	64.3	54.2	0.1	61.4	53.3	33.0	3.0	5.3	82.6	208.1	4.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	54.2	0.1	61.4	53.3	33.0	3.0	5.3	82.6	208.1	4.5	
LOS	E	D	А	E	D	С	Α	А	F	F	А	
Approach Delay		29.3			55.6		11.9			180.9		
Approach LOS		С			E		В			F		
Queue Length 50th (m)	8.1	28.8	0.0	8.8	39.9	~166.9	39.2	35.8	36.6	~287.7	0.0	
Queue Length 95th (m)	18.9	45.1	0.0	16.7	60.3	m#171.1	m18.8	m11.8	m#86.7	#321.8	m6.2	
Internal Link Dist (m)		90.1			43.7		219.9			189.4		
Turn Bay Length (m)			60.0			160.0			150.0		70.0	
Base Capacity (vph)	116	380	1478	225	373	652	2376	1230	172	1083	558	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.27	0.31	0.09	0.29	0.45	0.98	0.40	0.63	0.97	1.39	0.25	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 15 (12%), Referenced to ph	ase 2:NBTL a	and 6:SBTL,	Start of Gr	reen								
Natural Cycle: 150												
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 1.39												
Intersection Signal Delay: 80.5				In	tersection	LOS: F						
Intersection Capacity Utilization 106	6.6%			IC	U Level of	Service G						
Analysis Period (min) 15												
 Volume exceeds capacity, queu 	ue is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	s capacity, qu	eue may be	longer.									
Queue shown is maximum after	two cycles.											
m Volume for 95th percentile que	ue is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Roa	ad & Solandt F	Road					1		4			55
Ø2 (R)								Ø3	→ø	4		



Solandt TIA Background 2021 AM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	3	t.	3	1.	3	1.	3	t.	
Traffic Volume (vph)	429	257	3	28	99	183	53	188	
Future Volume (vph)	429	257	3	28	99	183	53	188	
Lane Group Flow (vph)	452	522	3	38	104	252	56	254	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	
Protected Phases		2		6		8		4	
Permitted Phases	2		6		8		4		
Detector Phase	2	2	6	6	8	8	4	4	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	
Act Effct Green (s)	28.5	28.5	25.0	25.0	17.8	17.8	17.8	17.8	
Actuated g/C Ratio	0.52	0.52	0 45	0.45	0.32	0.32	0.32	0.32	
v/c Ratio	0.68	0.60	0.10	0.05	0.34	0.45	0.19	0.46	
Control Delay	16.3	11.3	7.0	5.9	20.9	19.1	18.4	19.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	16.3	11.3	7.0	5.9	20.9	19.1	18.4	19.1	
	B	B	Δ	Δ	20.0 C	R	B	R	
Approach Delay	5	13 6	7.	6.0	Ŭ	19.6	5	19 0	
Approach LOS		B		A		B		B	
Queue Length 50th (m)	28.6	26 1	01	12	77	18 1	39	18.3	
Queue Length 95th (m)	76.9	69.7	1.3	5.9	26.7	51.6	15.5	51.8	
Internal Link Dist (m)	10.0	82.0	1.0	169.8	20.1	205.2	10.0	214.4	
Turn Bay Length (m)		02.0	45.0	100.0	70.0	200.2	40.0	L 17.7	
Base Canacity (vnh)	1215	1544	609	1606	752	1344	743	1356	
Starvation Can Reductn	0	0	0	0	0	0	0	0	
Spillback Can Reductn	0	0	0 0	0 0	0 0	0	0	0 0	
Storage Can Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.34	0.00	0.02	0 14	0 19	0.08	0 19	
	0.07	0.04	0.00	0.02	0.14	0.15	0.00	0.15	
Intersection Summary									
Cycle Length: 112.4									
Actuated Cycle Length: 55									
Natural Cycle: 60									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.68						00 D			
Intersection Signal Delay: 15.7				In	tersection L	OS: B			
Intersection Capacity Utilization 64.7%)			IC	U Level of S	Service C			
Analysis Period (min) 15									
Splits and Phases: 3: Legget Drive &	& Solandt	Road							
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66.2 s						46	2s		
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Solandt TIA Background 2021 AM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		្ឋ	1		aî.	1	×.	**	1	ሻሻ	**	1
Traffic Volume (vph)	63	26	9	37	12	184	88	2129	84	317	1285	123
Future Volume (vph)	63	26	9	37	12	184	88	2129	84	317	1285	123
Lane Group Flow (vph)	0	93	9	0	52	194	93	2241	88	334	1353	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.6	19.6		19.6	19.6	14.9	78.7	78.7	19.7	83.5	83.5
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.11	0.61	0.61	0.15	0.64	0.64
v/c Ratio		0.47	0.03		0.27	0.50	0.48	1.10	0.10	0.68	0.63	0.14
Control Delay		55.8	0.2		49.0	10.1	61.9	81.1	3.6	74.9	12.8	2.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		55.8	0.2		49.0	10.1	61.9	81.1	3.6	74.9	12.8	2.9
LOS		E	A		D	В	E	F	A	E	В	A
Approach Delay		50.9			18.3			77.5			23.5	
Approach LOS		D			В			E			С	
Queue Lenath 50th (m)		23.9	0.0		13.0	0.0	23.8	~355.7	0.2	44.2	189.0	0.0
Queue Length 95th (m)		35.3	0.0		22.0	18.9	40.9	#460.1	9.2	m26.0	m156.5	m10.6
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		368	469		360	547	233	2029	901	500	2154	952
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.25	0.02		0.14	0.35	0.40	1.10	0.10	0.67	0.63	0.14
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 68 (52%) Referenced to pha	se 2·NBT ar	nd 6.SBT S	tart of Gree	n								
Natural Cycle: 145	00 2.110 1 01	14 0.001, 0										
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1 10												
Intersection Signal Delay: 52 4				Int	tersection L	OS' D						
Intersection Capacity Utilization 97 7	%			IC	U Level of S	Service F						
Analysis Period (min) 15	,.											
 Volume exceeds capacity queue 	e is theoretic	ally infinite										
Queue shown is maximum after th	wo cycles	any minito.										
# 95th percentile volume exceeds	capacity ou	eue mav he	longer									
Queue shown is maximum after th	wo cycles	sao may be	.ongoi.									
m Volume for 95th percentile queu	le is metered	d by upstrea	m signal.									
		.,	- 0									
Splits and Phases: 4: March Road	& Carling A	venue										
	(D)							1				25



Synchro 9 Report

Solandt TIA Background 2021 PM 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	55	**	1	ሻሻ	**	1	55	***	1	×.	***	1
Traffic Volume (vph)	270	154	414	204	389	363	326	1569	107	75	658	125
Future Volume (vph)	270	154	414	204	389	363	326	1569	107	75	658	125
Lane Group Flow (vph)	284	162	436	215	409	382	343	1652	113	79	693	132
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	19.0	42.0	42.0	19.0	42.0	42.0	21.0	38.0	38.0	21.0	38.0	38.0
Total Split (%)	15.8%	35.0%	35.0%	15.8%	35.0%	35.0%	17.5%	31.7%	31.7%	17.5%	31.7%	31.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	14.8	31.0	31.0	14.4	30.6	30.6	17.2	47.7	47.7	13.6	41.4	41.4
Actuated g/C Ratio	0.12	0.26	0.26	0.12	0.26	0.26	0.14	0.40	0.40	0.11	0.34	0.34
V/C Ratio	0.71	0.19	0.73	0.55	0.48	0.07	0.74	0.80	0.17	0.42	0.42	0.22
Control Delay	0.9	33.4	10.1	0.0	38.8	10.0	0.0	25.4	1.7	55.4	32.7	3.0
Total Dalay	60.0	22.4	10.0	0.0	20.0	16.0	0.0	25.4	0.0	0.0	0.0	0.0
	00.9 E	55.4	10.1 D	00.0 E	30.0 D	10.0 D	50.5 E	20.4	1.7	55.4	32.1	3.0 A
Approach Dolay	E	34.7	D	E	22.7	D	E	20.5	A	E	30.4	A
Approach LOS		04.7 C			00.1 C			23.5			0.4	
Queue Length 50th (m)	35.2	15.1	24.9	26.1	41.4	19.0	39.4	~175.6	0.9	18.4	52 7	0.0
Queue Length 95th (m)	50.5	23.8	63.3	39.1	56.2	52.6	m41.4	m#194.2	m2.8	33.7	66.0	9.4
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0	2.0	100.0
Base Capacity (vph)	406	1061	667	406	1061	644	470	1913	669	237	1662	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.15	0.65	0.53	0.39	0.59	0.73	0.86	0.17	0.33	0.42	0.22
Intersection Summary												
Cvcle Lenath: 120												
Actuated Cycle Length: 120												
Offset: 72 (60%), Referenced to ph	ase 2:NBT a	nd 6:SBT, S	tart of Gree	n								
Natural Cycle: 110		,										
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 31.5				Int	tersection L	OS: C						
Intersection Capacity Utilization 80	.5%			IC	U Level of S	Service D						
Analysis Period (min) 15												
 Volume exceeds capacity, queu 	ue is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	s capacity, qu	eue may be	longer.									
Queue snown is maximum after	two cycles.	d by unotes -	moignel									
in volume for abtripercentile que	ue is metere	a by upstrea	un signal.									
Splits and Phases: 1: March Roa	ad & Terry Fo	x Drive										
					S		2					33

 Ø1
 Ø2 (R)
 Ø3
 Ø4

 21s
 38 s
 19 s
 42 s

 Ø5
 Ø6 (R)
 Ø7
 Ø8

 21 s
 38 s
 19 s
 42 s

Solandt TIA Background 2021 PM 2: March Road & Solandt Road

2: March Road & Solan	dt Road											PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	5	٨	1	55	1.	3	**	1	5	**	1	
Traffic Volume (vph)	87	43	651	677	75	121	1780	78	45	1000	68	
Future Volume (vph)	87	43	651	677	75	121	1780	78	45	1000	68	
Lane Group Flow (vph)	92	45	685	713	312	127	1874	82	47	1053	72	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	29.0	32.0		29.0	32.0	12.0	59.0	59.0	47.0	47.0	47.0	
Total Split (%)	24.2%	26.7%		24.2%	26.7%	10.0%	49.2%	49.2%	39.2%	39.2%	39.2%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	13.8	16.8	120.0	25.3	25.0	69.2	69.2	69.2	53.9	53.9	53.9	
Actuated g/C Ratio	0.12	0.14	1 00	0.21	0.21	0.58	0.58	0.58	0 45	0 45	0 45	
v/c Ratio	0.48	0.18	0.46	1.04	0.76	0.48	0.97	0.09	0.78	0.70	0.10	
Control Delay	57.2	44 7	10	91.8	39.0	18.2	23.1	0.2	95.7	26.6	4 1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.2	44 7	1.0	91.8	39.0	18.2	23.1	0.0	95.7	26.6	4 1	
105	F	D	A	61.6 F	D	B	20.1 C	A.C	F	20.0 C	A	
Approach Delay		97	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		75.7	5	21.9	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		28.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Approach LOS		Δ			F		21.0 C			20.0 C		
Queue Length 50th (m)	217	10.4	0.0	~99.4	47.5	42	117 1	0.1	11.0	103 7	27	
Queue Length 95th (m)	37.6	19.3	0.0	#138.3	73.7	m10.2	#345.8	m0.0	m#33.6	#163.4	m8.3	
Internal Link Dist (m)	0.10	90.1	0.0		43.7		219.9			189.4		
Turn Bay Length (m)		00.1	60.0		10.1	160.0	210.0		150.0	100.1	70.0	
Base Canacity (vph)	349	411	1477	685	462	266	1933	887	60	1506	730	
Starvation Can Reductn	045	0	0	000	0	0	0	0	0	0	0	
Spillback Can Reductn	0	0	0	0	0	0	0 0	0	0	0	0 0	
Storage Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.26	0.11	0.46	1 04	0.68	0.48	0.97	0.09	0.78	0 70	0 10	
	0.20	0.11	0.40	1.04	0.00	0.40	0.01	0.00	0.70	0.10	0.10	
Intersection Summary												
Cycle Length: 120 Actuated Cycle Length: 120 Offset: 21 (18%), Referenced to pha Natural Cycle: 140 Control Type: Actuated-Coordinated	ase 2:NBTL a	and 6:SBTL,	Start of G	reen								
Maximum v/c Ratio: 1.04	-											
Intersection Signal Delay: 32.2				In	tersection L	0S C						
Intersection Canacity Utilization 113	8.6%			IC		Service H						
Analysis Period (min) 15	.070			10								
~ Volume exceeds canacity queu	e is theoretic	ally infinite										
Quouo shown is maximum after		any minite.										
# 95th percentile volume exceeds	canacity qu	aua may ha	longer									
	two cyclos	cue may be	ionger.									
m Volume for 95th percentile que	ue is meteror	hy unstream	m signal									
in volume to sour percentile que		a by upsiled	ni siyilal.									
Splits and Phases: 2: March Roa	d & Solandt F	Road										
1 (R)					10	3						8 1101000



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Solandt TIA Background 2021 PM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	2	î.	×	T.	×	T.	3	t.	
Traffic Volume (vph)	56	32	51	260	290	108	7	251	
Future Volume (vph)	56	32	51	260	290	108	7	251	
Lane Group Flow (vph)	59	91	54	306	305	118	7	733	
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	
Protected Phases		2		6	3	8		4	
Permitted Phases	2		6		8		4		
Detector Phase	2	2	6	6	3	8	4	4	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	
Minimum Split (s)	25.2	25.2	25.2	25.2	11.2	25.2	25.2	25.2	
Total Split (s)	41.2	41.2	41.2	41.2	31.2	77.4	46.2	46.2	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	26.3%	65.3%	39.0%	39.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag					Lead		Lag	Lag	
Lead-Lag Optimize?					Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	
Act Effct Green (s)	24.0	24.0	24.8	24.8	68.0	68.0	42.7	42.7	
Actuated g/C Ratio	0.24	0.24	0.25	0.25	0.67	0.67	0.42	0.42	
v/c Ratio	0.46	0.22	0.18	0.71	0.72	0.10	0.01	1.03	
Control Delay	45.3	14.9	31.7	44.1	33.8	7.0	22.3	69.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	45.3	14.9	31.7	44.1	33.8	7.0	22.3	69.6	
LOS	D	В	С	D	С	A	С	E	
Approach Delay		26.9		42.3		26.3		69.1	
Approach LOS		С		D		С		E	
Queue Length 50th (m)	10.1	5.3	8.7	55.9	41.4	7.3	0.8	~149.5	
Queue Length 95th (m)	24.8	18.5	20.1	91.4	83.2	18.2	4.4	#276.6	
Internal Link Dist (m)		82.0		169.8		205.2		214.4	
Turn Bay Length (m)			45.0		70.0		40.0		
Base Capacity (vph)	201	618	451	649	518	1290	491	712	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.29	0.15	0.12	0.47	0.59	0.09	0.01	1.03	
Intersection Summary									
Cycle Length: 118.6									
Actuated Cycle Length: 100.9									
Natural Cycle: 90									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 1.03									
Intersection Signal Delay: 48 7				Int	tersection I (D.S. D			
Intersection Capacity Utilization 98.09	/_			IC	U Level of S	Service F			
Analysis Period (min) 15				10					
~ Volume exceeds canacity queue	is theoretic	ally infinite							
Queue shown is maximum after th	o cycles	any minite.							
# 95th percentile volume exceeds of	apacity ou	eue mav he	longer						
Queue shown is maximum after tw	vo cycles.	cuc may be	longer.						
Splits and Phases: 3. Lenget Drive	& Solandt	Road							
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- Ø2			03				♦ Ø4		
41.2 s			31.2 s				46.2 s		

PM.syn
Solandt TIA Background 2021 PM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		aî.	1		aî.	1	×.	**	1	55	**	1
Traffic Volume (vph)	26	13	30	121	19	321	33	1606	35	298	2061	50
Future Volume (vph)	26	13	30	121	19	321	33	1606	35	298	2061	50
Lane Group Flow (vph)	0	41	32	0	147	338	35	1691	37	314	2169	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	62.0	62.0	18.0	62.0	62.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	15.0%	51.7%	51.7%	15.0%	51.7%	51.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.9	22.9		23.2	23.2	10.7	66.9	66.9	17.9	79.3	79.3
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.09	0.56	0.56	0.15	0.66	0.66
v/c Ratio		0.16	0.09		0.60	0.77	0.23	0.90	0.04	0.65	0.98	0.05
Control Delay		38.0	0.5		52.6	30.5	53.9	33.5	0.1	50.3	40.3	2.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		38.0	0.5		52.6	30.5	53.9	33.5	0.1	50.3	40.3	2.5
LOS		D	А		D	С	D	С	Α	D	D	A
Approach Delay		21.6			37.2			33.2			40.8	
Approach LOS		С			D			С			D	
Queue Length 50th (m)		8.7	0.0		34.1	35.6	8.2	190.1	0.0	38.7	~309.2	0.0
Queue Length 95th (m)		16.6	0.0		49.0	62.5	18.5	#283.8	0.0	m49.0	m#400.0	m1.8
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		411	507		383	576	195	1869	861	486	2214	989
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.38	0.59	0.18	0.90	0.04	0.65	0.98	0.05
Intersection Summary												
Cycle Length: 120 Actuated Cycle Length: 120 Offset: 96 (80%), Referenced to pha Natural Cycle: 145	ise 2:NBT ar	nd 6:SBT, S	start of Gree	n								
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.98												
Intersection Signal Delay: 37.4				In	tersection L	OS: D						
Intersection Capacity Utilization 89.9	9%			IC	U Level of S	Service E						
Analysis Period (min) 15												
 Volume exceeds capacity, queue 	e is theoretic	ally infinite.										
Queue shown is maximum after t	wo cycles.											
# 95th percentile volume exceeds	capacity, qu	eue may be	e longer.									
Queue shown is maximum after t	wo cycles.											
m Volume for 95th percentile queu	ie is metered	d by upstrea	am signal.									
Splits and Phases: 4: March Road	d & Carling A	venue										80
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Solandt TIA Background 2021 AM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	e										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	**	**	1	**	***	1	**	**	1
Traffic Volume (vph)	105	537	289	70	137	56	281	532	169	373	1303	178
Future Volume (vph)	105	537	289	70	137	56	281	532	169	373	1303	178
Lane Group Flow (vph)	111	565	304	74	144	59	296	560	178	393	1372	187
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4 0	4 0	4.0	4 0	4 0	4.0	4.0	4.0	4.0	4.0	4.0
lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.5	32.5	32.5	10.8	29.3	29.3	19.1	52.1	52.1	21.2	54.2	54.2
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.40	0.40	0 16	0 42	0 42
v/c Ratio	0.39	0.68	0.52	0.27	0.19	0.13	0.62	0.29	0.26	0.74	0.98	0.27
Control Delay	59.9	47.9	7.2	58 1	39.1	0.6	47.2	28.9	12.2	61.2	58.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	47.9	7.2	58.1	39.1	0.6	47.2	28.9	12.2	61.2	58.5	9.0
105	F	D	A	F	D	A	D	C	B	F	F	A
Approach Delay	_	36 6		-	36 0		_	31.3	_	_	54 3	
Approach LOS		D			D			C			D	
Queue Lenath 50th (m)	14.7	73.9	0.0	9.7	16.5	0.0	35.4	40.0	14.2	51.3	~206.7	6.3
Queue Length 95th (m)	24.7	88.0	22.7	17.7	24.0	0.0	57.9	55.9	26.6	71.2	#285.8	25.6
Internal Link Dist (m)		141.2			123.6	0.0	01.10	179.2	2010		275.4	_0.0
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0	2.0	100.0
Base Capacity (vph)	300	980	634	300	980	532	525	1931	688	541	1398	685
Starvation Cap Reductn	0	0	0	0	0	0	0_0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.58	0.48	0.25	0.15	0.11	0.56	0.29	0.26	0.73	0.98	0.27
Interpretion Common (
Cycle Length: 130												
Actuated Cycle Length: 130			01 1 6 0									
Offset: 114 (88%), Referenced to p	phase 2:NBT a	and 6:SBT,	Start of Gre	en								
Natural Cycle: 120												
Control Type: Actuated-Coordinate	bd											
Maximum v/c Ratio: 0.98						00 D						
Intersection Signal Delay: 43.4	00/			In	tersection L	US:D						
Intersection Capacity Utilization 88	.0%			IC	U Level of S	Service E						
Analysis Period (min) 15												
~ volume exceeds capacity, que	ue is theoretic	ally infinite.										
Queue shown is maximum after	r two cycles.											
# 95th percentile volume exceed	s capacity, qu	eue may be	e longer.									
Queue shown is maximum after	r two cycles.											
Splits and Phases: 1: March Roa	ad & Terry Fo	x Drive										

opina and i naaca.	1. March Road & Terry Fox Drive		
Ø1	💗 🗖 Ø2 (R)	√ Ø3	₩04
25 s	47 s	16 s	42 s
105	📕 🕈 Ø6 (R)	▶ _{Ø7}	4 [⊕] _ Ø8
25 s	47 s	16 s	42 s

Solandt TIA Background 2021 AM (improved) 2: March Road & Solandt Road

2: March Road & Solan	dt Road	• •										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	7	*	1	2	î,	7	**	1	7	***	1	
Traffic Volume (vph)	29	110	129	63	121	607	898	739	158	1434	133	
Future Volume (vph)	29	110	129	63	121	607	898	739	158	1434	133	
Lane Group Flow (vph)	31	116	136	66	167	639	945	778	166	1509	140	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	13.0	32.0		13.0	32.0	39.0	85.0	85.0	46.0	46.0	46.0	
Total Split (%)	10.0%	24.6%		10.0%	24.6%	30.0%	65.4%	65.4%	35.4%	35.4%	35.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	8.6	19.5	130.0	8.8	22.1	92.1	92.1	92.1	42.0	42.0	42.0	
Actuated g/C Ratio	0.07	0.15	1.00	0.07	0.17	0.71	0.71	0.71	0.32	0.32	0.32	
v/c Ratio	0.28	0.44	0.09	0.30	0.56	0.98	0.40	0.63	0.97	0.97	0.25	
Control Delay	64.3	54.2	0.1	61.4	53.3	78.8	11.8	9.8	73.4	40.2	4.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	54.2	0.1	61.4	53.3	78.8	11.8	9.8	73.4	40.2	4.9	
LOS	E	D	A	E	D	E	В	A	E	D	A	
Approach Delay		29.3			55.6		29.3			40.5		
Approach LOS	0.4	00.0	0.0	0.0	20 O	475.0	10.0	40 5	04.4	105 D	0.0	
Queue Length 50th (m)	8.1	28.8	0.0	8.8	39.9	~1/5.2	42.2	18.5	31.4	105.8	2.2	
Queue Length 95th (m)	18.9	45.1	0.0	16.7	60.3	#280.9	94.2	115.5	m#55.6	m#86.5	m3.9	
Turn Day Length (m)		90.1	60.0		43.7	160.0	219.9		150.0	189.4	70.0	
Tum Bay Length (m)	110	200	00.0	005	070	100.0	0070	1000	150.0	4550	70.0	
Starvation Con Paduate	110	380	14/8	225	3/3	052	23/6	1230	1/2	0001	558	
Starvation Cap Reducts	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductin	0.27	0.31	0 00	0.20	0.45	0	0 40	0 63	0.07	0.07	0.25	
	0.21	0.51	0.09	0.29	0.45	0.90	0.40	0.05	0.97	0.97	0.23	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130			01 1 60									
Offset: 15 (12%), Referenced to ph	ase 2:NBTL a	and 6:SBTL,	, Start of Gi	reen								
Natural Cycle: 150												
Control Type: Actuated-Coordinate	a											
Maximum V/c Ratio: 0.98				l e i		00.0						
Intersection Signal Delay: 34.9	00/			In	tersection L							
Intersection Capacity Utilization 94.	.0%			IC	U Level of a	Service F						
Analysis Period (min) 15	ia thaaratia	ally infinite										
~ Volume exceeds capacity, que		any minue.										
# 05th porcentile volume evened	wo cycles.		longer									
9501 percentile volume exceeds	two evolution	eue may be	longer.									
m Volume for 95th percentile que	ue is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Roa	id & Solandt F	Road										
102 (R)								Ø3	-+0	4		



Solandt TIA Background 2021 AM (improved) 3: Legget Drive & Solandt Road

3: Legget Drive & Solandt Road AM.syn										
	≯	→	1	+	1	Ť	1	ŧ	~	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	5	1.	3	1.	×	1.	3	*	1	
Traffic Volume (vph)	429	257	3	28	99	183	53	188	53	
Future Volume (vph)	429	257	3	28	99	183	53	188	53	
Lane Group Flow (vph)	452	522	3	38	104	252	56	198	56	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases		2		6		8		4		
Permitted Phases	2		6		8		4		4	
Detector Phase	2	2	6	6	8	8	4	4	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.4	33.4	33.4	33.4	29.2	29.2	29.2	29.2	29.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.1	3.1	3.1	3.1	2.8	2.8	2.8	2.8	2.8	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	0.0	
Total Lost Time (s)	4.2	4.2	4.2	4.2	3.9	3.9	3.9	3.9	6.1	
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	28.4	28.4	24.9	24.9	17.8	17.8	17.8	17.8	15.4	
Actuated g/C Ratio	0.52	0.52	0.45	0.45	0.32	0.32	0.32	0.32	0.28	
v/c Ratio	0.68	0.60	0.01	0.05	0.30	0.45	0.19	0.35	0.12	
Control Delay	16.3	11.5	7.3	6.0	19.6	19.0	18.4	18.6	7.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	16.3	11.5	7.3	6.0	19.6	19.0	18.4	18.6	7.0	
LOS	В	B	A	A	В	B	В	B	A	
Approach Delay		13.7		6.1		19.2		16.5		
Approach LOS	00.0	В	0.4	A	7.0	B	0.0	В	0.0	
Queue Length 50th (m)	28.6	26.3	0.1	1.2	/.b	18.1	3.9	14.7	0.0	
Queue Length 95th (m)	77.0	69.9	1.3	5.9	25.8	51.5	15.6	41.9	8.1	
Internal Link Dist (m)		82.0	45.0	169.8	70.0	205.2	40.0	214.4	40.0	
Turn Bay Length (m)	4040	4544	45.0	4000	70.0	4040	40.0	4440	40.0	
Base Capacity (vpn)	1219	1544	612	1608	863	1348	740	1410	1137	
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0	
Spiliback Cap Reductin	0	0	0	0	0	0	0	0	0	
Boduced v/o Botio	0.27	0.24	0 00	0 02	0 12	0 10	0	0 14	0.05	
	0.37	0.34	0.00	0.02	0.12	0.19	0.00	0.14	0.05	
Intersection Summary										
Cycle Length: 112.4										
Actuated Cycle Length: 54.9										
Natural Cycle: 65										
Control Type: Semi Act-Uncoord										
Maximum V/c Ratio: 0.68				Lat		00 D				
Intersection Signal Delay: 15.2				In	tersection L	US: B				
Analysis Deried (min) 45				IC	U Level of S	Service C				
Analysis Period (min) 15										
Splits and Phases: 3: Legget Drive &	& Solandt	Road								
<u>)</u>							6			ý.
Ø2						1	Ø4			
66.3 a						100	2.0			

- Ø2	♥ Ø4	
66.2 s	46.2 s	
▼ Ø6	√1 Ø8	
66.2 s	46.2 s	

Solandt TIA Background 2021 AM (improved) 4: March Road & Carling Avenue

4: March Road & Carlir	ng Avenu	е										AM.syn
	٠	→	7	4	+	*	1	1	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		4	1	×.	***	1	17	**	1
Traffic Volume (vph)	63	26	9	37	12	184	88	2129	84	317	1285	123
Future Volume (vph)	63	26	9	37	12	184	88	2129	84	317	1285	123
Lane Group Flow (vph)	0	93	9	0	52	194	93	2241	88	334	1353	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	19.0	68.3	68.3	19.0	68.3	68.3
Total Split (%)	32.8%	32.8%	32.8%	32.8%	32.8%	32.8%	14.6%	52.5%	52.5%	14.6%	52.5%	52.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.2	4.2		4.2	4.2	3.8	3.9	3.9	3.8	3.9	3.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.2	20.2		20.2	20.2	14.2	78.1	78.1	19.8	83.7	83.7
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.11	0.60	0.60	0.15	0.64	0.64
v/c Ratio		0.45	0.03		0.26	0.50	0.51	0.77	0.10	0.67	0.63	0.14
Control Delay		54.4	0.2		47.8	11.2	64.2	23.2	3.6	43.5	29.8	13.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.4	0.2		47.8	11.2	64.2	23.2	3.6	43.5	29.8	13.3
LOS		D	А		D	В	E	С	А	D	С	В
Approach Delay		49.6			18.9			24.1			31.1	
Approach LOS		D			В			С			С	
Queue Length 50th (m)		23.9	0.0		12.9	2.2	23.8	152.9	0.2	48.9	113.1	10.6
Queue Length 95th (m)		34.1	0.0		21.3	20.3	42.2	229.2	9.2	m53.4	m127.7	m12.6
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		394	495		388	566	200	2894	895	495	2158	953
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.24	0.02		0.13	0.34	0.47	0.77	0.10	0.67	0.63	0.14
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%) Referenced to phase	e 2.NBT and	6.SBT Sta	rt of Green									
Natural Cycle: 115		0.001, 010										
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 0.77												
Intersection Signal Delay: 27.2				In	tersection L	OS: C						
Intersection Capacity Litilization 80	0%			IC	Ulevelof	Service D						
Analysis Period (min) 15					0 20101 01 0							
m Volume for 95th percentile que	eue is metered	d by upstrea	am signal.									
Splits and Phases: 4: March Roa	ad & Carling A	venue	U -									

opinto anta i maocor		
Ø1	Ø2 (R)	₽ Ø4
19 s	68.3 s	42.7 s
105	● Ø6 (R)	₩ Ø8
19 s	68.3 s	42.7 s

Solandt TIA Background 2021 PM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										PM.syn
	٠	→	7	1	+	*	1	1	1	1	ŧ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	55	**	1	ሻሻ	**	1	55	***	1	ሻሻ	**	1
Traffic Volume (vph)	270	154	414	204	389	363	326	1569	107	75	658	125
Future Volume (vph)	270	154	414	204	389	363	326	1569	107	75	658	125
Lane Group Flow (vph)	284	162	436	215	409	382	343	1652	113	79	693	132
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	19.0	45.0	45.0	16.0	42.0	42.0	24.9	57.1	57.1	11.9	44.1	44.1
Total Split (%)	14.6%	34.6%	34.6%	12.3%	32.3%	32.3%	19.2%	43.9%	43.9%	9.2%	33.9%	33.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-27	-27	-2.9	-27	-27
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.0	34.0	34.0	12.0	31.0	31.0	19.9	62.0	62.0	87	48.1	48.1
Actuated q/C Ratio	0.12	0.26	0.26	0.09	0 24	0.24	0.15	0 48	0.48	0.07	0.37	0.37
v/c Ratio	0.12	0.20	0.20	0.00	0.24	0.24	0.10	0.40	0.40	0.07	0.57	0.07
Control Delay	69.4	36.0	28.4	71.4	44.2	30.9	57.3	38.9	9.10	63.5	36.6	0.20
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.4	36.0	28.4	71.4	44.2	30.9	57.3	38.9	9.0	63.5	36.6	0.0
	00.4 F	00.0 D	20.4	/1.4 F	-т2 D	00.0 C	57.5 F	00.0 D	Δ	00.0 F	00.0 D	0.5
Approach Delay	L.	43.0	U	L.	45.0	0	L	40.3	Π.	L	33.7	~
Approach LOS		-0.0 D			-0.0 D			D			C.	
Queue Length 50th (m)	38.8	16.5	45.6	29.5	46.8	42 7	48.3	113.6	16	10.7	85.7	0.0
Queue Length 95th (m)	#57 5	25.6	87.4	#45.6	62.7	81.4	=10.0 m53.0	m153.1	m9.9	19.4	108.0	0.0
Internal Link Dist (m)	101.0	141.2	01.4	11-10.0	123.6	01.4	1100.0	179.2	110.0	10.4	275.4	0.4
Turn Bay Length (m)	105.0	171.2	60.0	60.0	120.0	75.0	160.0	170.2	85.0	105.0	210.4	100.0
Base Canacity (vnh)	375	1057	621	300	980	562	522	2295	763	216	1241	662
Starvation Can Reductn	0,0	0	0	000	000	002	022	0	0	0	0	002
Spillback Can Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Can Reducto	ů 0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.15	0.70	0.72	0.42	0.68	0.66	0.72	0.15	0.37	0.56	0.20
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	e 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 110												
Control Type: Actuated-Coordinated	d											
Maximum v/c Ratio: 0.78												
Intersection Signal Delay: 40.5				Int	tersection L	OS: D						
Intersection Capacity Utilization 80.	2%			IC	U Level of	Service D						
Analysis Period (min) 15												
# 95th percentile volume exceeds	s capacity, qu	eue may be	longer.									
Queue shown is maximum after	two cycles.	,	Ū									
m Volume for 95th percentile que	ue is metered	l by upstrea	am signal.									
Splits and Phases: 1: March Roa	d & Terrv Fo	k Drive										
		-				6-						25
102 (R)						▼ Ø3	-	-104				_

Ø1	Ø2 (R) 🛡	✓ Ø3 → Ø4	
11.9 s 5	7.1s	16 s 45 s	
↑ø5	🚽 🚽 Ø6 (R)	▶ _{Ø7} ♣ _{Ø8}	
24.9 s	44.1s	19 s 42 s	

Solandt TIA Background 2021 PM (improved) 2: March Road & Solandt Road

2: March Road & Soland	dt Road											PM.syn
	٨	-	7	1	+	1	Ť	1	4	ţ	~	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	7	*	1	ሻሻ	î,	7	**	1	7	***	1	
Traffic Volume (vph)	87	43	651	677	75	121	1780	78	45	1000	68	
Future Volume (vph)	87	43	651	677	75	121	1780	78	45	1000	68	
Lane Group Flow (vph)	92	45	685	713	312	127	1874	82	47	1053	72	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	35.5		10.9	35.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	23.1	35.5		33.1	45.5	11.4	61.4	61.4	50.0	50.0	50.0	
Total Split (%)	17.8%	27.3%		25.5%	35.0%	8.8%	47.2%	47.2%	38.5%	38.5%	38.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	14.3	17.2	130.0	29.1	28.7	75.0	75.0	75.0	60.1	60.1	60.1	
Actuated g/C Ratio	0.11	0.13	1.00	0.22	0.22	0.58	0.58	0.58	0.46	0.46	0.46	
v/c Ratio	0.50	0.19	0.46	0.98	0.72	0.43	0.97	0.09	0.85	0.47	0.09	
Control Delay	63.1	49.1	1.0	79.1	36.9	28.5	44.5	6.1	125.0	38.7	2.5	
Queue Delav	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.1	49.1	1.0	79.1	36.9	28.5	44.5	6.1	125.0	38.7	2.5	
105	E	D	A	E	D	C	D	A	F	D	A	
Approach Delay		10.6		_	66.3		42.0			39.9		
Approach LOS		В			E		D			D		
Queue Lenath 50th (m)	23.8	11.4	0.0	99.2	49.8	12.3	161.6	0.0	12.1	94.0	0.4	
Queue Length 95th (m)	40.7	20.2	0.0	#140.3	73.1	45.0	#371.2	m8.8	m#29.6	115.2	m3.1	
Internal Link Dist (m)		90.1	0.0		43.7	1010	219.9	11.010		189.4		
Turn Bay Length (m)			60.0			160.0	2.0.0		150.0		70.0	
Base Canacity (vnh)	246	427	1477	727	574	295	1933	904	55	2226	766	
Starvation Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Can Reductn	Õ	Õ	0	0	0	Ő	0	Ū	Ū	Õ	0	
Storage Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0 11	0.46	0.98	0.54	0 43	0.97	0.09	0.85	0 47	0.09	
	0.01	0.11	0.10	0.00	0.01	0.10	0.01	0.00	0.00	0.11	0.00	
Intersection Summary												
Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase Natural Cycle: 145	e 2:NBTL and	i 6:SBTL, Si	tart of Gree	'n								
Control Type: Actuated-Coordinated	1											
Maximum v/c Ratio: 0.98						00 D						
Intersection Signal Delay: 41.4				Int	ersection L(JS: D						
Intersection Capacity Utilization 114	.4%			IC	U Level of S	Service H						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, que	eue may be	longer.									
Queue shown is maximum after	two cycles.											
m Volume for 95th percentile que	ue is metered	by upstrea	m signal.									
Splits and Phases: 2: March Road	d & Solandt F	₹oad										
1 Ø2 (R					Ø3			-	Ø4			28
61.4s					3.1s			35	i.5 s			
												20 B

102 (R	√ Ø3	▶ø4
61.4s	33.1s	35.5 s
▲ Ø5 🖕 ▲ Ø6 (R)	▶ _{Ø7} ← _{Ø8}	
11.4 s 50 s	23.1 s 45.5 s	

Solandt TIA Background 2021 PM (improved) 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	*	Δ.	*	Δ.	*	Δ.	*	٨	#
Traffic Volume (vph)	56	32	51	260	290	108	7	251	446
Future Volume (vph)	56	32	51	260	290	108	7	251	446
Lane Group Flow (vph)	59	91	54	306	305	118	7	264	469
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		2		6	3	8		4	
Permitted Phases	2	_	6		8	-	4	-	4
Detector Phase	2	2	6	6	3	8	4	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.4	33.4	33.4	33.4	11.2	29.2	29.2	29.2	29.2
Total Split (s)	40.6	40.6	40.6	40.6	24.0	78.0	54.0	54.0	54.0
Total Split (%)	34.2%	34.2%	34.2%	34.2%	20.2%	65.8%	45.5%	45.5%	45.5%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.1	3.1	3.1	3.1	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	0.0
Total Lost Time (s)	4.2	4.2	4.2	4.2	4.0	4.0	4.0	4.0	6.2
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.6	20.6	20.7	20.7	37.6	37.2	22.4	22.4	20.0
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.52	0.52	0.31	0.31	0.28
v/c Ratio	0.29	0.19	0.15	0.61	0.52	0.13	0.02	0.48	0.79
Control Delay	27.4	12.1	23.3	29.3	12.3	7.6	19.0	23.8	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	12.1	23.3	29.3	12.3	7.6	19.0	23.8	21.2
LOS	С	В	С	С	В	A	В	С	С
Approach Delay		18.1		28.4		10.9		22.1	
Approach LOS		В		С		В		С	
Queue Length 50th (m)	5.9	3.2	5.1	33.1	18.0	6.0	0.6	27.3	23.5
Queue Length 95th (m)	21.4	17.2	18.5	83.5	44.7	17.4	3.9	63.2	75.6
Internal Link Dist (m)		82.0	1= 0	169.8		205.2	10.0	214.4	1
Turn Bay Length (m)		070	45.0	0.10	/0.0	1010	40.0	1000	15.0
Base Capacity (vph)	389	879	663	946	682	1618	874	1322	1120
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spiliback Cap Reductin	0	0	0	0	0	0	0	0	0
Storage Cap Reducth	0 15	0 10	0 00	0 20	0.45	0.07	0.01	0 20	0
Reduced V/C Ratio	0.15	0.10	0.08	0.32	0.45	0.07	0.01	0.20	0.42
Intersection Summary									
Cycle Length: 118.6									
Actuated Cycle Length: 71.7									
Natural Cycle: 75									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.79						~ ~			
Intersection Signal Delay: 20.3				Int	tersection L	US: C			
Intersection Capacity Utilization 75.3	%			IC	U Level of S	Service D			
Analysis Period (min) 15									
Splits and Phases: 3: Legget Drive	& Solandt	Road							
	a colund		1		1	4			
			103			1 014			
DL.			. 25			1 21			

→ ø2	1 Ø3	
40.6 s	24 s	54 s
✓ Ø6	₫ <i>ø</i> 8	
40.6 s	78 s	

PM.syn

Solandt TIA Background 2021 PM (improved) 4: March Road & Carling Avenue

Lane Concurrence EBL EBL EBL EBL EBL WBL WBL WBR NBT NBR SBL SBT SBR Lane Concignations	4: March Road & Carling	g Avenue	Э										PM.syn
Lane Group Level 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		٠	+	1	4	Ļ	*	1	Ť	1	1	ţ	~
Lane Configurations A Perr Tion Type Dem NA Perm NA Perm Perm NA Perm NA Perm NA Perm Prot NA Perm NA Perm NA Perm NA Perm NA Perm	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Tartin: Volume (rph) 26 13 30 121 19 321 33 1666 35 296 2661 55 Lame Group Flow (rph) 0 41 32 0 147 338 35 1991 37 314 2169 53 Lame Group Flow (rph) 0 41 32 0 147 338 35 1991 37 314 2169 53 Um Type Perm< NA	Lane Configurations		đ	1		4	1	5	***	1	ሻሻ	**	1
Linker (volph) 26 13 30 121 19 321 33 1666 35 298 2061 50 Turn Type Perm NA Perm	Traffic Volume (vph)	26	13	30	121	19	321	33	1606	35	298	2061	50
Lare Group Flow (ph) 0 41 32 0 147 338 35 1691 37 314 2169 53 Protected Phases 4 4 8 8 5 2 1 6 6 Protected Phases 4 4 8 8 5 2 1 6 6 Detector Phase 4 4 4 8 8 8 5 2 2 1 6 6 Detector Phase 4 4 4 8 8 8 5 2 2 1 6 6 Detector Phase 4 4 4 8 8 8 5 2 2 1 6 6 Detector Phase 4 4 4 8 8 8 5 2 2 1 6 6 Detector Phase 4 4 4 8 8 8 5 2 2 2 1 6 6 6 Winnum Solit (s) 10.0 10.0 10.0 10.0 10.0 10.0 5.0 20.0 20.0 20.0 20.0 20.0 20.0 20	Future Volume (vph)	26	13	30	121	19	321	33	1606	35	298	2061	50
Turn Type: Perm NA Perm Pot NA Perm Pot NA Perm Pot NA Perm Perm NA Perm NA Perm Perm NA Perm Perm NA Perm Perm NA Perm NA Perm NA Perm Perm Perm Perm NA Perm	Lane Group Flow (vph)	0	41	32	0	147	338	35	1691	37	314	2169	53
Problemed Phases 4 8 5 2 1 6 Detector Phase 4 4 8 8 2 6 6 Detector Phase 4 4 8 8 5 2 1 6 6 Minimum Solit (s) 10.0 10.0 10.0 10.0 10.0 20.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0 5.0 20.0	Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Permited Phases 4 4 4 8 8 8 7 2	Protected Phases		4			8		5	2		1	6	
Detector Phase 4 4 8 8 8 5 2 2 1 6 6 Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 50 20.0	Permitted Phases	4		4	8		8			2			6
Switch Phase Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 5.0 20.0 5.0 20.0 20.0 Total Split (s) 42.7	Switch Phase												
Minimum Split (s) 42.7 42.7 42.7 42.7 42.7 42.7 11.5 30.5 30.5 11.5 30.5 30.5 Total Split (s) 42.7 42.7 42.7 42.7 42.7 42.7 42.7 42.7	Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Total Spin (%) 42.7 42.7 42.7 42.7 42.7 42.7 11.5 64.1 64.1 23.2 75.8 75.8 Yellow Time (s) 3.7 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8 3.9 3.8<	Minimum Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	30.5	30.5	11.5	30.5	30.5
Total Sp(1%) 32.8% 32.8% 32.8% 32.8% 32.8% 38.8% 49.3% 49.3% 17.8% 58.3% 63.3% Velow Time (s) 3.0 3.0 3.0 3.0 3.0 3.0 1.9 <	Total Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	64.1	64.1	23.2	75.8	75.8
Yellow Time (s) 3.7 3.7 3.7 3.7 3.7 3.7 3.7 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6	Total Split (%)	32.8%	32.8%	32.8%	32.8%	32.8%	32.8%	8.8%	49.3%	49.3%	17.8%	58.3%	58.3%
All-Red Time (s) 3.0 3.0 3.0 3.0 1.9 <td>Yellow Time (s)</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td>	Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
Lead Time Adjust (s) -2.5 -2.5 -2.5 -2.6 -2.6 -2.6 -2.6 -2.6 -2.6 -2.6 -2.6	All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9
Total Lost Time (a) 4.2 4.2 4.2 4.2 3.8 3.9 3.8 2.1 Lead Lagd Lipt Optimize? Yes Ye	Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Lead Lag Olimice? Ves Ves Ves Ves Ves Ves Ves Recal Mode None None None None None None None Non	Total Lost Time (s)		4.2	4.2		4.2	4.2	3.8	3.9	3.9	3.8	3.9	3.9
Lead-Lag Optimize? Yes	Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Recall Mode None None None None Cone Cone C-Max C-Max None C-Max C-Max None C-Max C-Max None C-Max C-Max None C-Max C-M	Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Act Effet Green (s) 25.0 25.0 25.4 25.4 27.7 73.5 73.5 79.3 88.2 88.2 Actuated g/C Ratio 0.19 0.19 0.20 0.20 0.07 0.57 <td>Recall Mode</td> <td>None</td> <td>None</td> <td>None</td> <td>None</td> <td>None</td> <td>None</td> <td>None</td> <td>C-Max</td> <td>C-Max</td> <td>None</td> <td>C-Max</td> <td>C-Max</td>	Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Actuated g/C Ratio 0.19 0.19 0.19 0.20 0.20 0.07 0.57 0.57 0.57 0.57 0.5 0.58 0.68 0.68 0.68 0.68 0.62 0.64 0.65 0.95 0.05 Control Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Act Effct Green (s)		25.0	25.0		25.4	25.4	9.7	73.5	73.5	19.3	88.2	88.2
wic Ratio 0.16 0.08 0.59 0.028 0.22 0.04 0.65 0.95 0.05 Control Delay 40.7 0.4 55.5 37.5 63.2 21.9 0.1 51.8 30.8 2.1 Dueue Delay 0.0 <t< td=""><td>Actuated g/C Ratio</td><td></td><td>0.19</td><td>0.19</td><td></td><td>0.20</td><td>0.20</td><td>0.07</td><td>0.57</td><td>0.57</td><td>0.15</td><td>0.68</td><td>0.68</td></t<>	Actuated g/C Ratio		0.19	0.19		0.20	0.20	0.07	0.57	0.57	0.15	0.68	0.68
Control Delay 40.7 0.4 55.5 37.5 63.2 21.9 0.1 51.8 30.8 2.1 Ducue Delay 0.0 </td <td>v/c Ratio</td> <td></td> <td>0.16</td> <td>0.08</td> <td></td> <td>0.59</td> <td>0.80</td> <td>0.28</td> <td>0.62</td> <td>0.04</td> <td>0.65</td> <td>0.95</td> <td>0.05</td>	v/c Ratio		0.16	0.08		0.59	0.80	0.28	0.62	0.04	0.65	0.95	0.05
Queue Delay 0.0 <th< td=""><td>Control Delay</td><td></td><td>40.7</td><td>0.4</td><td></td><td>55.5</td><td>37.5</td><td>63.2</td><td>21.9</td><td>0.1</td><td>51.8</td><td>30.8</td><td>2.1</td></th<>	Control Delay		40.7	0.4		55.5	37.5	63.2	21.9	0.1	51.8	30.8	2.1
Total Delay 40 7 0.4 55.5 37.5 63.2 21.9 0.1 51.8 30.8 21.1 LOS D A E D E C A D C A Approach Delay 23.0 42.9 22.3 32.8 32.8 Approach LOS C D C C C C Q 0.0 31.6 74.5.2 9.0 107.9 0.0 41.2 331.8 0.0 0.0 model and the participation of the participatin of the participation of the partipatin the participa	Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS D A E D E C A D C A Approach Delay 23.0 42.9 22.3 32.8 Approach LOS C D C	Total Delay		40.7	0.4		55.5	37.5	63.2	21.9	0.1	51.8	30.8	2.1
Approach Delay 23.0 42.9 22.3 32.8 Approach LOS C D C C Queue Length 50th (m) 9.3 0.0 36.7 45.2 9.0 107.9 0.0 41.2 ~331.8 0.0 Queue Length 95th (m) 17.5 0.0 52.4 72.3 20.9 154.9 0.0 m56.9 m#397.6 m2.8 Internal Link Dist (m) 128.6 308.2 130.8 353.3 Tum Bay Length (m) 353.3 Tum Bay Length (m) 353.3 Tum Bay Length (m) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0	LOS		D	А		E	D	E	С	А	D	С	A
Approach LOS C D C C Queue Length 50th (m) 9.3 0.0 36.7 45.2 9.0 107.9 0.0 41.2 ~331.8 0.0 Queue Length 50th (m) 17.5 0.0 52.4 72.3 20.9 154.9 0.0 m65.9 m#397.6 m.2.8 Internal Link Dist (m) 128.6 308.2 130.8 353.3 Tom Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0	Approach Delay		23.0			42.9			22.3			32.8	
Queue Length 50th (m) 9.3 0.0 36.7 45.2 9.0 107.9 0.0 41.2 -331.8 0.0 Queue Length 95th (m) 17.5 0.0 52.4 72.3 20.9 154.9 0.0 m50.9 m397.6 m2.8 Turm Bay Length (m) 128.6 308.2 130.8 353.3 Time Bay Length (m) 406 532 378 556 12.4 2723 891 504 2274 1010 Starvation Cap Reductn 0<	Approach LOS		С			D			С			С	
Queue Length 95th (m) 17.5 0.0 52.4 72.3 20.9 154.9 0.0 m56.9 m#397.6 m2.8 Internal Link Dist (m) 128.6 308.2 130.8 353.3 353.3 Tum Bay Length (m) 30.0 50.0 95.0 70.0 190.0 250.0 Base Capacity (vph) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0	Queue Length 50th (m)		9.3	0.0		36.7	45.2	9.0	107.9	0.0	41.2	~331.8	0.0
Internal Link Dist (m) 128.6 308.2 130.8 353.3 Turm Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0 </td <td>Queue Length 95th (m)</td> <td></td> <td>17.5</td> <td>0.0</td> <td></td> <td>52.4</td> <td>72.3</td> <td>20.9</td> <td>154.9</td> <td>0.0</td> <td>m56.9</td> <td>m#397.6</td> <td>m2.8</td>	Queue Length 95th (m)		17.5	0.0		52.4	72.3	20.9	154.9	0.0	m56.9	m#397.6	m2.8
Turn Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0	Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Base Capacity (vph) 406 532 378 556 124 2723 891 504 2274 1010 Starvation Cap Reductn 0	Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td></td> <td>406</td> <td>532</td> <td></td> <td>378</td> <td>556</td> <td>124</td> <td>2723</td> <td>891</td> <td>504</td> <td>2274</td> <td>1010</td>	Base Capacity (vph)		406	532		378	556	124	2723	891	504	2274	1010
Spillback Cap Reductin 0	Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn 0	Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio 0.10 0.06 0.39 0.61 0.28 0.62 0.04 0.62 0.95 0.05 Intersection Summary Cycle Length: 130	Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Reduced v/c Ratio		0.10	0.06		0.39	0.61	0.28	0.62	0.04	0.62	0.95	0.05
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Intersection Summary												
Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 000000000000000000000000000000000000	Actuated Cycle Length: 130												
Natural Cycle: 145 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 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: 4: March Road & Carling Avenue	Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	t of Green									
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	Natural Cycle: 145												
Maximum v/c Ratio: 0.95 Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Control Type: Actuated-Coordinated												
Intersection Signal Delay: 29.9 Intersection LOS: C Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Maximum v/c Ratio: 0.95												
Intersection Capacity Utilization 90.2% ICU Level of Service E Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	Intersection Signal Delay: 29.9				Int	tersection L	OS: C						
Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Intersection Capacity Utilization 90.2	2%			IC	U Level of S	Service E						
 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Molume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue 	Analysis Period (min) 15												
Queue shown is maximum after two cycles. # 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: 4: March Road & Carling Avenue	 Volume exceeds capacity, queue 	e is theoretic	ally infinite.										
 # 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: 4: March Road & Carling Avenue 	Queue shown is maximum after t	wo cycles.											
Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue	Queue shown is maximum after t	wo cycles.											
Splits and Phases: 4: March Road & Carling Avenue	m Volume for 95th percentile queu	ie is metered	l by upstrea	m signal.									
	Splits and Phases: 4: March Road	1 & Carling A	venue										
									A				

 Ø1
 Ø2 (R)

 2s
 64.1s

 Ø5
 Ø6 (R)

CIMA+

.5s

75.8

42.7 s

Solandt TIA Background 2026 AM 1: March Road & Terry Fox Drive

Lane Group EBL EBT EBT EBT VIDL WBT WBT WBT NBL NBT NBT NBT SBL SBT SBL Lane Group Capital Strip A A A C B A A C B A A C B A A C B A A C B A C B A C B C B	1: March Road & Terry	Fox Driv	е										AM.syn
Lane Group EBL EBT EBL VBL WBT WBR NBL NBT VBR SBL SBT SBR Traffic Vulume (rph) 122 550 256 71 141 72 251 649 72 1670 222 160 226 71 141 72 251 650 169 169 170 141 72 251 650 716 140 72 251 757 143 76 226 736 718 449 788 24 78 240 78 244 8 5 2 1 6 78 74 4 3 8 5 2 1 1 6 78 74 4 3 8 5 2 2 1 6 78 74 4 3 8 5 2 2 7 72 72 72 72 72 72 72 72 72		٠	+	1	4	Ŧ	*	1	1	1	1	ţ	~
Lare Comfigurations YR AA YR YR <td>Lane Group</td> <td>EBL</td> <td>EBT</td> <td>EBR</td> <td>WBL</td> <td>WBT</td> <td>WBR</td> <td>NBL</td> <td>NBT</td> <td>NBR</td> <td>SBL</td> <td>SBT</td> <td>SBR</td>	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (uph) 122 550 296 71 141 72 291 689 169 427 1670 222 Lame Group Flow (uph) 128 579 312 75 148 76 296 738 178 449 178 221 1670 222 Lame Group Flow (uph) 128 579 312 75 148 76 296 738 178 449 178 243 Premited Phases 4 3 8 5 2 1 6 6 Permited Phases 4 18 8 5 2 2 1 6 6 Minimum Inial (s) 160 420 140 110 100 50 100 100 27.327 137 37.37 37.37 37.37 37.37 37.37 37.37 37.37 37.33 33.3 33.3 33.3 33.3 33.3 33.3 33.3 33.3 33.3 <td< td=""><td>Lane Configurations</td><td>88</td><td>**</td><td>1</td><td>88</td><td>**</td><td>1</td><td>88</td><td>***</td><td>1</td><td>88</td><td>**</td><td>1</td></td<>	Lane Configurations	88	**	1	88	**	1	88	***	1	88	**	1
Fulue Volume (vph) 122 550 256 71 141 72 281 699 427 1670 228 Tum Type Prot NA Perm Prot NA Par	Traffic Volume (vph)	122	550	296	71	141	72	281	699	169	427	1670	222
Lane Group Flow (vph) 128 579 312 75 148 76 296 736 178 449 1758 234 Perm Prot NA P	Future Volume (vph)	122	550	296	71	141	72	281	699	169	427	1670	222
Turn Type Prot NA Perm Prot NA Perm Prot NA Perm Permited Phases 7 4 4 8 2 1 6 Permited Phases 7 4 4 8 5 2 2 1 6 Switch Phase 7 4 4 8 8 5 2 2 1 6 6 Minimum Ising (s) 118 42.0 14.0 119 32.7 32.7 37	Lane Group Flow (vph)	128	579	312	75	148	76	296	736	178	449	1758	234
Proteized Phases 7 4 3 8 5 2 1 6 Permited Phase 7 4 4 3 8 5 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 4 4 3 8 8 5 2 2 1 6 Permited Phase 7 4 7 4 7 0 25 4 7 0 47 0 Permited Phase 7 4 7 4 7 0 25 4 7 0 47 0 Permited Phase 7 1 9 32 7 32 7 32 7 32 7 32 7 32 7 32 7 32	Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Permitted Phases 1 8 8 8 2 1 6 6 Switch Phase 7 4 4 3 8 8 5 2 2 1 6 6 Switch Phase 118 42.0 10.0 10.0 5.0 10.0 10.0 5.0 20.0	Protected Phases	7	4		3	8		5	2		1	6	
Delector Phase 7 4 4 3 8 8 5 2 2 1 6 6 Minimum Initial (s) 5.0 10.0 10.0 5.0 10.0 20.0 40.0	Permitted Phases			4			8			2			6
Switch Phase Solid 100 100 5.0 100 100 5.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 <td>Detector Phase</td> <td>7</td> <td>4</td> <td>4</td> <td>3</td> <td>8</td> <td>8</td> <td>5</td> <td>2</td> <td>2</td> <td>1</td> <td>6</td> <td>6</td>	Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s) 5.0 10.0 10.0 5.0 10.0 5.0 20.0 20.0 5.0 20.0 20.0 27 11.9 32.7 32.7 11.9 32.7 32.7 31.7 32.7 7 10.4 32.0 42.0 11.8 42.0 42.0 11.9 32.7 32.7 11.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.7 32.7 31.9 32.9 32.9 (s) 29.8 36.2% 36.2\% 3	Switch Phase												
Minimum Split (s) 11.8 42.0 11.8 42.0 11.9 32.7 32.7 11.9 32.7 <td>Minimum Initial (s)</td> <td>5.0</td> <td>10.0</td> <td>10.0</td> <td>5.0</td> <td>10.0</td> <td>10.0</td> <td>5.0</td> <td>20.0</td> <td>20.0</td> <td>5.0</td> <td>20.0</td> <td>20.0</td>	Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Total Spit (k) 16.0 42.0 12.0 42.0 22.0 47.0<	Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (%) 12.3% 32.3% 12.3% 22.3% 12.3% 32.3% 19.2% 36.2% 36.2% 19.2% 36.2% 32.% 19.2% 32.% 19	Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Yellow Time (s) 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8 4.8	Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
All-Red Time (s) 3.1 3.3 3.1 3.3 3.3 2.1 <td>Yellow Time (s)</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>3.7</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td> <td>4.6</td>	Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
Lost Time Adjust (s) 2.8 3.0 -3.0 -2.8 3.0 -3.0 2.9 2.7 2.7 2.7 2.9 2.7 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.9 2.7 2.7 2.9 2.7 2.7 2.9 2.7 2.9 2.7 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.7 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.7 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9	All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Total Lost Time (s) 4.0<	Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Lead:Lag Optimize? Yes	Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead-Lag Optimize? Yes	Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Recall Mode None None None None None C-Max L-A L-A <thl-a< th=""> L-A L-A</thl-a<>	Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Act Effect Green (s) 11.7 32.8 32.8 10.9 29.4 29.4 19.1 50.2 50.2 22.7 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 53.9 0.28 0.23 0.15 0.39 0.39 0.39 0.17 0.41 0.42 0.32 0.17 0.44 0.43 0.42 0.33 0.41 0.41 0.41 0.41 0.41 0.41 0.41 0.41 0.41 0.41 0.43 0.51 0.10 <td< td=""><td>Recall Mode</td><td>None</td><td>None</td><td>None</td><td>None</td><td>None</td><td>None</td><td>None</td><td>C-Max</td><td>C-Max</td><td>None</td><td>C-Max</td><td>C-Max</td></td<>	Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Actuated g/C Ratio 0.09 0.25 0.25 0.08 0.23 0.23 0.15 0.39 0.17 0.41 0.41 VC Ratio 0.44 0.69 0.53 0.28 0.20 0.17 0.62 0.40 0.79 1.27 0.34 Control Delay 0.0 <td>Act Effct Green (s)</td> <td>11.7</td> <td>32.8</td> <td>32.8</td> <td>10.9</td> <td>29.4</td> <td>29.4</td> <td>19.1</td> <td>50.2</td> <td>50.2</td> <td>22.7</td> <td>53.9</td> <td>53.9</td>	Act Effct Green (s)	11.7	32.8	32.8	10.9	29.4	29.4	19.1	50.2	50.2	22.7	53.9	53.9
vic Ratio 0.44 0.69 0.53 0.28 0.20 0.17 0.62 0.40 0.27 0.79 1.27 0.34 Control Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 Queue Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 Oueue Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 Oueue Length Delay 37.2 34.2 33.3 127.0 27.0 27.2 22.8 14.6 Queue Length 95th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.2 84.4 4399.3 39.5 114 141.2 123.6 179.2 275.4 179.0 128.0 128.0 160.0 56.0 100.0 10.0 10.0 128.0 128.0 128.0 128.0 128.0 128.0 128.0 <td>Actuated g/C Ratio</td> <td>0.09</td> <td>0.25</td> <td>0.25</td> <td>0.08</td> <td>0.23</td> <td>0.23</td> <td>0.15</td> <td>0.39</td> <td>0.39</td> <td>0.17</td> <td>0.41</td> <td>0.41</td>	Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.39	0.39	0.17	0.41	0.41
Control Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 Queue Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 LOS E D A E D A D C B E F B Approach LOS D C C C F C Queue Length 50th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.3 58.2 -322.8 14.6 Queue Length 55th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 17.3 58.2 -322.8 14.6 Queue Length 55th (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 632 525 <td>v/c Ratio</td> <td>0.44</td> <td>0.69</td> <td>0.53</td> <td>0.28</td> <td>0.20</td> <td>0.17</td> <td>0.62</td> <td>0.40</td> <td>0.27</td> <td>0.79</td> <td>1.27</td> <td>0.34</td>	v/c Ratio	0.44	0.69	0.53	0.28	0.20	0.17	0.62	0.40	0.27	0.79	1.27	0.34
Queue Delay 0.0 <th< td=""><td>Control Delay</td><td>61.0</td><td>48.1</td><td>7.1</td><td>58.2</td><td>39.1</td><td>0.8</td><td>46.8</td><td>32.9</td><td>12.6</td><td>62.4</td><td>158.6</td><td>13.0</td></th<>	Control Delay	61.0	48.1	7.1	58.2	39.1	0.8	46.8	32.9	12.6	62.4	158.6	13.0
Total Delay 61.0 48.1 7.1 58.2 39.1 0.8 46.8 32.9 12.6 62.4 158.6 13.0 LOS E D A E D A D C B E F B Approach LOS D C C C F C Queue Length 50th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.3 58.2 ~322.8 14.6 Queue Length 95th (m) 27.7 90.3 23.2 18.0 24.6 0.0 58.0 74.5 29.7 #88.4 #399.3 39.5 Internal Link Dist (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 00.0 <	Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS E D A E D A D C B E F B Approach Delay 37.2 34.2 33.3 127.0 F Queue Length 50th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.3 58.2 -322.8 14.6 Queue Length 95th (m) 27.7 90.3 23.2 18.0 24.6 0.0 56.0 74.5 29.7 #88.4 #399.3 39.5 Internal Link Dist (m) 141.2 123.6 179.2 275.4 100.0 Base Capacity (vph) 300 980 632 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Total Delay	61.0	48.1	7.1	58.2	39.1	0.8	46.8	32.9	12.6	62.4	158.6	13.0
Approach Delay 37.2 34.2 33.3 127.0 Approach LOS D C C F Queue Length 95th (m) 27.7 90.3 23.2 18.0 24.6 0.0 58.0 74.5 29.7 #88.4 #399.3 39.5 Internal Link Dist (m) 141.2 123.6 179.2 275.4 100.0 105.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 0	LOS	E	D	A	E	D	A	D	С	В	E	F	В
Approach LOS D C C F Queue Length 95th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.3 58.2 -322.8 14.6 Queue Length 95th (m) 27.7 90.3 23.2 18.0 24.6 0.0 58.0 74.5 29.7 #88.4 #399.3 39.5 Turm Bay Length (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 632 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Approach Delay		37.2			34.2			33.3			127.0	
Queue Length 90th (m) 17.1 75.7 0.0 9.9 16.8 0.0 36.4 50.2 12.3 58.2 -322.8 14.6 Queue Length 90th (m) 27.7 90.3 23.2 18.0 24.6 0.0 58.0 74.5 29.7 #88.4 #399.3 39.5 Internal Link Dist (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 633 300 980 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Approach LOS		D			С			С			F	
Queue Length 95h (m) 27.7 90.3 23.2 18.0 24.6 0.0 58.0 74.5 29.7 #88.4 #399.3 39.5 Internal Link Dist (m) 141.2 123.6 179.2 275.4 179.2 275.4 Tum Bay Length (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 639 300 980 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Queue Length 50th (m)	17.1	75.7	0.0	9.9	16.8	0.0	36.4	50.2	12.3	58.2	~322.8	14.6
Internal Link Dist (m) 141.2 123.6 179.2 2275.4 Tum Bay Length (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 633 300 980 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Queue Length 95th (m)	27.7	90.3	23.2	18.0	24.6	0.0	58.0	74.5	29.7	#88.4	#399.3	39.5
Turn Bay Length (m) 105.0 60.0 60.0 75.0 160.0 85.0 105.0 100.0 Base Capacity (vph) 300 980 639 300 980 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0 1 1	Internal Link Dist (m)	105.0	141.2			123.6		400.0	179.2		105.0	275.4	400.0
Base Capacity (vph) 300 980 639 300 980 532 525 1862 670 568 1389 682 Starvation Cap Reductn 0	Turn Bay Length (m)	105.0		60.0	60.0		/5.0	160.0	1000	85.0	105.0	(000	100.0
Starvation Cap Reductin 0 <td>Base Capacity (vph)</td> <td>300</td> <td>980</td> <td>639</td> <td>300</td> <td>980</td> <td>532</td> <td>525</td> <td>1862</td> <td>670</td> <td>568</td> <td>1389</td> <td>682</td>	Base Capacity (vph)	300	980	639	300	980	532	525	1862	670	568	1389	682
Splitback Cap Reductin 0 <th0< th=""></th0<>	Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductin 0	Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced V/c Ratio 0.43 0.59 0.49 0.25 0.15 0.14 0.56 0.40 0.27 0.79 1.27 0.34 Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection LOS: F Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Reduced V/C Ratio	0.43	0.59	0.49	0.25	0.15	0.14	0.50	0.40	0.27	0.79	1.27	0.34
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	Intersection Summary												
Actuated Cycle Length: 130 Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Cycle Length: 130												
Offset: 114 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection Capacity Utilization 98.9% Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Actuated Cycle Length: 130												
Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Offset: 114 (88%), Referenced to p	hase 2:NBT a	and 6:SBT,	Start of Gre	en								
Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Natural Cycle: 150												
Maximum v/c Ratio: 1.27 Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Control Type: Actuated-Coordinate	d											
Intersection Signal Delay: 80.2 Intersection LOS: F Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Boad & Terry Fox Drive	Maximum v/c Ratio: 1.27												
Intersection Capacity Utilization 98.9% ICU Level of Service F Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Intersection Signal Delay: 80.2				In	tersection L	OS: F						
Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Intersection Capacity Utilization 98	.9%			IC	U Level of S	Service F						
 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. 	Analysis Period (min) 15												
Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	 Volume exceeds capacity, quei 	ue is theoretic	ally infinite.										
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. Solits and Phases: 1: March Road & Terry Fox Drive	Queue shown is maximum after	two cycles.											
Queue shown is maximum after two cycles.	# 95th percentile volume exceeds	s capacity, qu	eue may be	e longer.									
Splits and Phases: 1: March Road & Terry Fox Drive	Queue shown is maximum after	two cycles.											
	Splits and Phases 1 March Roa	ad & Terry Fo	x Drive										

opilis and Fhases.	1. March Ruau & Terry Fux Drive		
Ø1	Ø2 (R)	√ Ø3	₩ Ø4
25 s	47 s	16 s	42 s
1 Ø5	📕 🗣 Ø6 (R)	≯ _{Ø7}	4 [≜] Ø8
25 s	47 s	16 s	42 s

Solandt TIA Background 2026 AM 2: March Road & Solandt Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	7	*	1	ሻሻ	ţ,	7	**	1	5	***	1	
Traffic Volume (vph)	29	110	133	63	121	607	1065	739	158	1809	133	
Future Volume (vph)	29	110	133	63	121	607	1065	739	158	1809	133	
Lane Group Flow (vph)	31	116	140	66	167	639	1121	778	166	1904	140	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases	-	4	Free	0	0	2	0	2	6	0	6	
Detector Phase	1	4		3	8	5	2	2	6	6	6	
Switch Phase	F 0	10.0		F 0	10.0	۲ ۵	00.0	00.0	00.0	00.0	00.0	
Minimum Initial (S)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	20.3	20.3	20.3	20.3	20.3	
Total Split (S)	10.0%	32.0		10.0%	32.0	39.0	0.00	00.U	40.0	40.U	40.0	
Vellow Time (a)	10.0%	24.0%		10.0%	24.0%	30.0%	00.4%	00.4%	30.4%	35.4%	30.4%	
All Pod Time (s)	2.5	3.3		3.3	3.3	4.0	4.0	4.0	4.0	4.0	4.0	
Lost Time Adjust (s)	_1.0	-2.5		_1.0	-2.5	-2.3	-23	-23	-2.3	-23	-23	
Total Lost Time (s)	-1.5	-2.5		-1.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	
Lead/Lag	Lead	l an		Lead	Lau	Lead	4.0	4.0	Lag	4.0 L an	l an	
Lead-Lag	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)	8.6	19.5	130.0	8.8	22.1	92.1	92.1	92.1	42.0	42.0	42.0	
Actuated g/C Ratio	0.07	0.15	1.00	0.07	0.17	0.71	0.71	0.71	0.32	0.32	0.32	
v/c Ratio	0.28	0.44	0.09	0.30	0.56	0.98	0.47	0.63	1.15	1.22	0.25	
Control Delay	64.3	54.2	0.1	61.4	53.3	76.7	13.2	9.3	106.9	129.6	4.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	54.2	0.1	61.4	53.3	76.7	13.2	9.3	106.9	129.6	4.3	
LOS	E	D	А	Е	D	E	В	А	F	F	А	
Approach Delay		28.9			55.6		28.0			120.0		
Approach LOS		С			E		С			F		
Queue Length 50th (m)	8.1	28.8	0.0	8.8	39.9	~175.0	59.6	21.8	~50.8	~225.2	2.4	
Queue Length 95th (m)	18.9	45.1	0.0	16.7	60.3	m#277.1	109.8	116.1	m#44.1	m#120.2	m2.9	
Internal Link Dist (m)		90.1			43.7		219.9			189.4		
Turn Bay Length (m)			60.0			160.0			150.0		70.0	
Base Capacity (vph)	116	380	1478	225	373	652	2376	1230	144	1556	558	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced V/C Ratio	0.27	0.31	0.09	0.29	0.45	0.98	0.47	0.63	1.15	1.22	0.25	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 15 (12%), Referenced to phase	e 2:NBTL a	and 6:SBTL,	Start of Gr	een								
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum V/c Ratio: 1.22				lat	orogation I							
Intersection Signal Delay: 67.9	0/					LUS: E Convice C						
Apply the Derived (min) 15	70			ICI	J Level OI	Service G						
Analysis Feriou (min) 15	e theoretic	ally infinito										
Queue shown is maximum after two		any minite.										
# 95th percentile volume exceeds ca	nacity qu	eue mav he	longer									
Oueue shown is maximum after two	n cvcles	cuc may be	longer.									
m Volume for 95th percentile queue	is metered	l by upstrea	n signal.									
Splits and Phases: 2: March Road 8	Solandt F	Road										
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Solandt TIA Background 2026 AM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	1	1.	3	1.	1	1.	1	•	1	
Traffic Volume (vph)	429	257	3	28	99	192	53	197	53	
Future Volume (vph)	429	257	3	28	99	192	53	197	53	
Lane Group Flow (vph)	452	522	3	38	104	261	56	207	56	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases		2		6		8		4		
Permitted Phases	2		6		8		4		4	
Detector Phase	2	2	6	6	8	8	4	4	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.4	33.4	33.4	33.4	29.2	29.2	29.2	29.2	29.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.1	3.1	3.1	3.1	2.8	2.8	2.8	2.8	2.8	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.1	-2.1	-2.1	-2.1	-2.1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	29.0	29.0	25.4	25.4	18.0	18.0	18.0	18.0	18.0	
Actuated g/C Ratio	0.52	0.52	0.46	0.46	0.32	0.32	0.32	0.32	0.32	
V/C Ratio	0.68	0.60	0.01	0.05	0.30	0.47	0.19	0.30	0.11	
Control Delay	10.2	11.4	7.3	0.0	19.9	19.5	18.7	18.9	0.4	
Queue Delay	16.0	11.4	0.0	0.0	10.0	10.5	10.0	10.0	0.0	
	10.Z	11.4 D	1.5	0.0	19.9	19.0	10. <i>1</i>	10.9	0.4	
LUS Approach Dolay	В	13 7	А	A 6 1	В	10.6	Б	16 7	A	
Approach LOS		13.7 R		0.1		19.0 R		10.7 R		
Oueue Length 50th (m)	28.9	26.6	0.1	12	77	19.2	40	15.6	0.0	
Queue Length 95th (m)	77.8	70.7	1.4	6.0	26.2	54.1	15.8	44.3	7.8	
Internal Link Dist (m)	11.0	82.0	1.7	169.8	20.2	205.2	10.0	214.4	7.0	
Turn Bay Length (m)		02.0	45.0	100.0	70.0	200.2	40.0	2 17.7	40.0	
Base Canacity (vnh)	1215	1539	606	1602	837	1334	718	1393	1169	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.34	0.00	0.02	0.12	0.20	0.08	0.15	0.05	
Intersection Summary										
Cycle Length: 112.4										
Actuated Cycle Length: 55.7 Natural Cycle: 65										
Control Type: Semi Act-Uncoord										
Maximum v/c Ratio: 0.68										
Intersection Signal Delay: 15.3				In	tersection L	OS: B				
Intersection Capacity Utilization 66.0%				IC	U Level of S	Service C				
Analysis Period (min) 15										
Splits and Phases: 3: Legget Drive &	& Solandt	Road								
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66.2 s		46.2 s	
▼ø6		A DS	
66.2 s		46.2 s	

Solandt TIA Background 2026 AM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1	1		4	1	*	***	1	**	**	1
Traffic Volume (vph)	63	26	9	38	12	188	90	2292	86	317	1664	123
Future Volume (vph)	63	26	9	38	12	188	90	2292	86	317	1664	123
I ane Group Flow (vph)	0	93	9	0	53	198	95	2413	91	334	1752	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4	•	4	8	v	8	Ŭ	-	2		v	6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase		•		Ŭ	v	v	Ŭ	-	-		v	v
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	50	20.0	20.0	50	20.0	20.0
Minimum Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	30.5	30.5	11.5	30.5	30.5
Total Solit (s)	42.1	42.7	42.7	42.7	42.7	42.7	19.0	68.3	68.3	19.0	68.3	68.3
Total Split (%)	32.8%	32.8%	32.8%	32.8%	32.8%	32.8%	14.6%	52.5%	52.5%	14.6%	52.5%	52.5%
Vellow Time (s)	32.070	32.070	37	32.070	32.070	32.070	14.070	16	16	14.070	16	16
All_Red Time (s)	3.7	3.0	3.0	3.0	3.7	3.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (S)	5.0	3.0	3.0	5.0	0.0 0.7	0.0	1.5	1.5	1.5	1.5	1.5	1.9
Lost Time Aujust (s)		-2.1	-2.1		-2.1	-2.1	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Maria	Maria	Maria	Maria	N	Maria	Yes	Yes	Yes	Yes	Yes	Yes
	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.4	20.4		20.4	20.4	14.1	/8.0	/8.0	19.7	83.5	83.5
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.11	0.60	0.60	0.15	0.64	0.64
v/c Ratio		0.45	0.03		0.26	0.51	0.52	0.84	0.10	0.68	0.81	0.14
Control Delay		54.0	0.2		47.8	12.0	65.1	25.6	3.8	39.3	39.1	13.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.0	0.2		47.8	12.0	65.1	25.6	3.8	39.3	39.1	13.7
LOS		D	A		D	В	E	С	A	D	D	В
Approach Delay		49.3			19.6			26.2			37.7	
Approach LOS		D			В			С			D	
Queue Length 50th (m)		23.8	0.0		13.2	3.4	24.4	176.8	0.5	49.1	177.2	11.0
Queue Length 95th (m)		34.0	0.0		21.4	21.5	43.2	#279.5	9.9	m43.9	m142.0	m9.8
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		396	497		390	567	199	2889	893	491	2154	952
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.23	0.02		0.14	0.35	0.48	0.84	0.10	0.68	0.81	0.14
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 125												
Control Type: Actuated-Coordinated	1											
Maximum v/c Ratio: 0.84												
Intersection Signal Delay: 31.3				In	tersection L	OS: C						
Intersection Capacity Utilization 83.3	3%			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
Queue shown is maximum after t	wo cycles.		v									
m Volume for 95th percentile queu	le is metere	d by upstrea	m signal.									
Calife and Disease A Marcel D												
Splits and Phases: 4: March Road	a & Carling A	Avenue										5
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Ø1	Ø2 (R)	₩Ø4
19 s	68.3 s	42.7 s
1 Ø5	● Ø6 (R)	₩ Ø8
19 s	68.3 s	42.7 s

Solandt TIA Background 2026 PM 1: March Road & Terry Fox Drive

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	88	**	1	88	***	1	17	**	1
Traffic Volume (vph)	310	158	424	209	398	411	326	1816	107	96	797	145
Future Volume (vph)	310	158	424	209	398	411	326	1816	107	96	797	145
Lane Group Flow (vph)	326	166	446	220	419	433	343	1912	113	101	839	153
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	19.0	45.0	45.0	16.0	42.0	42.0	24.9	57.1	57.1	11.9	44.1	44.1
Total Split (%)	14.6%	34.6%	34.6%	12.3%	32.3%	32.3%	19.2%	43.9%	43.9%	9.2%	33.9%	33.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.0	35.2	35.2	12.0	32.2	32.2	19.9	57.9	57.9	8.9	46.9	46.9
Actuated g/C Ratio	0.12	0.27	0.27	0.09	0.25	0.25	0.15	0.45	0.45	0.07	0.36	0.36
V/C Ratio	0.87	0.18	0.80	0.73	0.50	0.05	0.69	0.89	0.10	0.45	0.69	0.24
Control Delay	/9.0	35.3	31.2	12.4	43.3	40.1	55.Z	44.0	9.7	0.00	40.9	2.1
Queue Delay	70.6	0.0	21.2	0.0	12.2	10.0	0.0	14.0	0.0	0.0	40.0	0.0
	79.0	33.3 D	01.Z	72.4 E	43.3 D	40.1	00.Z	44.0 D	9.7	05.0 E	40.9 D	2.1
Approach Delay	L	48.8	U	L	48.0	U	L	44.0	A	L	37.7	A
Approach LOS		-0.0 D			-0.0 D			ידי.0 D			סי. ח	
Queue Length 50th (m)	45.2	16.9	52 7	30.3	48.2	58.9	48.5	158 7	19	13.8	109.8	0.0
Queue Length 95th (m)	#71.1	26.2	96.4	#47.0	64.2	104.0	m47.6	m158.0	m7.6	23.7	136.1	5.3
Internal Link Dist (m)		141.2	00.1	<i>"</i> 11.0	123.6	101.0		179.2		20.1	275.4	0.0
Turn Bay Length (m)	105.0		60.0	60.0	.20.0	75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	375	1057	612	300	980	562	522	2145	723	222	1210	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.16	0.73	0.73	0.43	0.77	0.66	0.89	0.16	0.45	0.69	0.24
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2	2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 120		,										
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.89												
Intersection Signal Delay: 44.4				Int	ersection L	OS: D						
Intersection Capacity Utilization 86.6%	6			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds c	apacity, qu	eue may be	longer.									
Queue shown is maximum after tw	o cycles.											
m Volume for 95th percentile queue	e is metered	d by upstrea	m signal.									
Splits and Phases: 1: March Road	& Terry Fo:	x Drive										
		-				1						20 20
01 02 (R) 🛡						♥ Ø3	1	-04				

Ø1	🖡 Ø2 (R) 🛡	€ Ø3 →04	
11.9 s	57.1 s	16 s 45 s	
ØS	📕 🗣 Ø6 (R)	▶ _{Ø7} ★ _{Ø8}	
24.9 s	44.1s	19 s 42 s	

Solandt TIA Background 2026 PM 2: March Road & Solandt Road

2: March Road & Solan	dt Road											PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	*	1	ካካ	î.	7	**	1	7	***	1	
Traffic Volume (vph)	87	43	668	677	75	121	2027	78	45	1154	68	
Future Volume (vph)	87	43	668	677	75	121	2027	78	45	1154	68	
Lane Group Flow (vph)	92	45	703	713	312	127	2134	82	47	1215	72	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	35.5		10.9	35.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	26.1	35.5		33.1	42.5	11.4	61.4	61.4	50.0	50.0	50.0	
Total Split (%)	20.1%	27.3%		25.5%	32.7%	8.8%	47.2%	47.2%	38.5%	38.5%	38.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-25	-23	-23	-23	-23	-23	-23	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	1.0	1.0	Lag	Lag	Lag	
Lead-Lag Ontimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effet Green (s)	14.3	17.3	130.0	29.1	28.7	74 9	74 9	74 9	59.5	59.5	59.5	
Actuated q/C Ratio	0 11	0.13	1 00	0.22	0.22	0.58	0.58	0.58	0.46	0.46	0.46	
v/c Ratio	0.11	0.10	0.48	0.22	0.22	0.30	1 10	0.00	0.40	0.40	0.40	
Control Delay	63.0	49.1	1 1	79.1	37.0	33.40	85.7	6 9	120.1	42.6	2.5	
	0.0	49.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	42.0	2.5	
Total Delay	63.0	/0.0	1 1	70.1	37.0	33.5	85.7	6.0	120.1	12.6	2.5	
	00.0 E	-J.I D	Δ	73.1 E	ол.5 П	00.0 C	50.7 F	Δ	120.1 E	42.0 D	Δ	
Approach Delay	L	10.4	~	L	66.6	U	80.1	~	1	43.1	~	
Approach LOS		10.4 R			00.0		500.1			 D		
Oueue Length 50th (m)	23.8	11 4	0.0	99.2	50 9	17.8	~328 9	0.4	12.2	112 5	0.0	
Oueue Length 95th (m)	40.6	20.2	0.0	#140.3	74.3	m41.1	#448.8	m7.6	m#24.8	132.0	m0.9	
Internal Link Dist (m)	40.0	Q0.2	0.0	#140.0	/3.7	11171.1	210.0	.0	111#24.0	180 /	110.5	
Turn Bay Length (m)		30.1	60.0		40.7	160.0	213.3		150.0	103.4	70.0	
Base Capacity (yph)	28/	107	1/177	707	544	264	1032	00/	55	2203	760	
Starvation Can Reductn	204	427	0	0	0	204	1992	0	0	2203	007	
Spillback Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Poducod v/o Potio	0 32	0 11	0.48	0 08	0.57	0 / 8	1 10	0 00	0.85	0.55	0 00	
	0.52	0.11	0.40	0.30	0.57	0.40	1.10	0.03	0.05	0.55	0.03	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phas	e 2:NBTL and	d 6:SBTL, S	tart of Gree	n								
Natural Cycle: 145												
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 1.10												
Intersection Signal Delay: 58.1				Int	ersection L	OS: E						
Intersection Capacity Utilization 12	1.6%			IC	U Level of S	Service H						
Analysis Period (min) 15												
~ Volume exceeds capacity, queu	ue is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	s capacity, qu	eue may be	longer.									
Queue shown is maximum after	two cycles.	,	J.									
m Volume for 95th percentile que	ue is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Roa	ad & Solandt F	Road										
				8				22				22

Solandt TIA Background 2026 PM 3: Legget Drive & Solandt Road

3: Legget Drive & Solandt Road											
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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR		
Lane Configurations	X	î.	×	t.	×	t.	×	*	1		
Traffic Volume (vph)	56	32	51	260	290	114	7	264	446		
Future Volume (vph)	56	32	51	260	290	114	7	264	446		
Lane Group Flow (vph)	59	91	54	306	305	124	7	278	469		
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm		
Protected Phases		2		6	3	8		4			
Permitted Phases	2		6		8		4		4		
Detector Phase	2	2	6	6	3	8	4	4	4		
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0		
Minimum Split (s)	33.4	33.4	33.4	33.4	11.2	29.2	29.2	29.2	29.2		
Total Split (s)	40.6	40.6	40.6	40.6	24.0	78.0	54.0	54.0	54.0		
Total Split (%)	34.2%	34.2%	34.2%	34.2%	20.2%	65.8%	45.5%	45.5%	45.5%		
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		
All-Red Time (s)	3.1	3.1	3.1	3.1	2.9	2.9	2.9	2.9	2.9		
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.2	-2.2	-2.2	-2.2	-2.2		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Lead/Lag					Lead		Lag	Lag	Lag		
Lead-Lag Optimize?					Yes		Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	None	None	None		
Act Effct Green (s)	20.9	20.9	21.0	21.0	38.0	37.6	22.7	22.7	22.7		
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.53	0.52	0.31	0.31	0.31		
v/c Ratio	0.29	0.18	0.15	0.60	0.53	0.14	0.02	0.50	0.74		
Control Delay	27.4	12.0	23.3	29.2	12.4	7.6	19.0	24.2	18.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
I otal Delay	27.4	12.0	23.3	29.2	12.4	7.6	19.0	24.2	18.0		
LOS	С	B	С	C	В	A	В	C	В		
Approach Delay		18.1		28.3		11.0		20.3			
Approach LOS	F 0	B	5.0	22.2	10.4	B	0.0	00.4	00.0		
Queue Length 50th (m)	5.9	3.2	5.Z	33.3	10.1	0.3	0.0	29.1	22.8		
Queue Length 95th (m)	21.5	17.2	18.5	83.7	44.9	10.2	3.9	00.9	74.1		
Turn Day Longth (m)		82.0	45.0	109.8	70.0	205.2	40.0	214.4	15.0		
Page Canadity (unb)	205	070	45.0	045	70.0	1615	40.0	1010	115.0		
Starvation Can Boduath	305	019	003	945	0/4	0	004	1313	1155		
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0		
Starage Can Reductin	0	0	0	0	0	0	0	0	0		
Poducod v/o Patio	0 15	0 10	0 08	032	0.45	0 08	0.01	0.21	0.41		
	0.15	0.10	0.00	0.52	0.45	0.00	0.01	0.21	0.41		
Intersection Summary											
Cycle Length: 118.6											
Actuated Cycle Length: 72.2											
Natural Cycle: 75											
Control Type: Semi Act-Uncoord											
Intersection Signal Delay: 10/				Ini	arsaction L	OS: B					
Intersection Canacity Litilization 73.3%						Service D					
Analysis Period (min) 15	,			10							
Splits and Phases: 3: Legget Drive	& Solandt	Road									
	a oolandt		•		8	1				\$5	
•Ø2			۱Ø3			▼ Ø4	8				

4 ₀₂	1 Ø3	
40.6 s	24 s	54 s
₹ Ø6	™ ø8	
40.6 s	78 s	

Solandt TIA Background 2026 PM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenue	Э										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		្ឋ	1		្ឋ	1	5	***	1	ሻሻ	**	1
Traffic Volume (vph)	26	13	30	124	19	329	34	1845	36	298	2232	50
Future Volume (vph)	26	13	30	124	19	329	34	1845	36	298	2232	50
Lane Group Flow (vph)	0	41	32	0	151	346	36	1942	38	314	2349	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	42.7	42.7	42.7	42.7	42.7	42.7	11.5	64.1	64.1	23.2	75.8	75.8
Total Split (%)	32.8%	32.8%	32.8%	32.8%	32.8%	32.8%	8.8%	49.3%	49.3%	17.8%	58.3%	58.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)		-2.7	-2.7		-2.7	-2.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		25.8	25.8		26.3	26.3	9.5	72.7	72.7	19.1	87.3	87.3
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.07	0.56	0.56	0.15	0.67	0.67
v/c Ratio		0.15	0.08		0.59	0.80	0.30	0.72	0.04	0.66	1.04	0.05
Control Delay		39.9	0.4		54.5	38.5	63.7	25.0	0.1	52.7	52.2	1.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		39.9	0.4		54.5	38.5	63.7	25.0	0.1	52.7	52.2	1.9
LOS		D	А		D	D	E	С	Α	D	D	A
Approach Delay		22.6			43.4			25.2			51.3	
Approach LOS		С			D			С			D	
Queue Length 50th (m)		9.2	0.0		37.3	48.1	9.3	138.0	0.0	42.1	~391.4	0.0
Queue Length 95th (m)		17.4	0.0		53.5	76.2	21.5	192.0	0.0	m57.4	m#449.1	m2.2
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		408	534		380	556	122	2693	883	499	2251	1001
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.40	0.62	0.30	0.72	0.04	0.63	1.04	0.05
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	e 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 145												
Control Type: Actuated-Coordinated	ł											
Maximum v/c Ratio: 1.04												
Intersection Signal Delay: 40.2				Int	tersection L	OS: D						
Intersection Capacity Utilization 95.2	2%			IC	U Level of S	Service F						
Analysis Period (min) 15												
~ Volume exceeds capacity, queu	e is theoretic	ally infinite.										
Queue shown is maximum after t	two cycles.											
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
Queue shown is maximum after t	two cycles.											
m Volume for 95th percentile queu	ue is metered	l by upstrea	m signal.									
Colite and Dhagas	d Q Carlina A	VODUC										
opins and Phases: 4: March Road		venue										35
	Tan (n)							1				

 Ø1
 Ø2 (R)

 3.2 s
 64.1 s

 Ø5
 Ø6 (R)

 1.5 s
 75.8 s

Solandt TIA Background 2026 AM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	**	1	55	**	1	55	***	1	55	***	1
Traffic Volume (vph)	122	550	296	71	141	72	281	699	169	427	1670	222
Future Volume (vph)	122	550	296	71	141	72	281	699	169	427	1670	222
Lane Group Flow (vph)	128	579	312	75	148	76	296	736	178	449	1758	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	46.0	46.0	11.8	46.0	46.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	11.8	46.0	46.0	11.8	46.0	46.0	17.0	42.2	42.2	30.0	55.2	55.2
Total Split (%)	9.1%	35.4%	35.4%	9.1%	35.4%	35.4%	13.1%	32.5%	32.5%	23.1%	42.5%	42.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.8	33.9	33.9	7.8	31.6	31.6	16.7	50.2	50.2	24.4	57.9	57.9
Actuated g/C Ratio	0.06	0.26	0.26	0.06	0.24	0.24	0.13	0.39	0.39	0.19	0.45	0.45
v/c Ratio	0.66	0.66	0.59	0.38	0.18	0.15	0.71	0.40	0.26	0.74	0.82	0.31
Control Delay	76.1	46.1	16.7	64.8	37.0	0.6	51.6	46.2	19.1	57.5	37.0	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	46.1	16.7	64.8	37.0	0.6	51.6	46.2	19.1	57.5	37.0	4.9
LOS	E	D	В	E	D	Α	D	D	В	E	D	A
Approach Delay		40.8			34.7			43.5			37.7	
Approach LOS		D			С			D			D	
Queue Length 50th (m)	17.7	75.6	22.1	10.2	16.7	0.0	42.1	50.8	9.5	58.5	159.3	1.6
Queue Length 95th (m)	#30.4	86.1	48.8	18.7	23.4	0.0	#70.8	92.1	48.2	77.4	#189.3	18.3
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	195	1083	609	195	1083	612	418	1862	687	650	2145	763
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.53	0.51	0.38	0.14	0.12	0.71	0.40	0.26	0.69	0.82	0.31
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%) Referenced to phas	e 2·NRT and	6 SBT Star	t of Green									
Natural Cycle: 115		0.001, 0101										
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 0.82	u											
Intersection Signal Delay: 39.6				Int	tersection I	OS D						
Intersection Capacity Litilization 86	3%			IC		Service F						
Analysis Period (min) 15	.0 /0			10								
# 95th percentile volume exceeds	s canacity ou	eue mav he	longer									
Queue shown is maximum after	two cvcles.	cuc may be	longer.									
Splits and Phases: 1: March Pos	nd & Terry Fo	x Drive										
						6	_					55
-01	· · · ·	02 (R)			_	▼Ø.	5 V	-04				

Ø1	💗 🛛 🖉 2 (R)	🕈 Ø3	▼Ø4
30 s	42.2 s	11.8 s	46 s
1 Ø5	🖗 Ø6 (R) 🕊		Ø8
17 s	55.2 s	11.8 s	46 s

Solandt TIA Background 2026 AM (improved) 2: March Road & Solandt Road

2: March Road & Soland	dt Road		-									AM.syn
	٨	+	7	4	+	1	Ť	1	1	ŧ	1	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	×	*	1	55	Ţ.	55	***	1	55	***	1	
Traffic Volume (vph)	29	110	133	63	121	607	1065	739	158	1809	133	
Future Volume (vph)	29	110	133	63	121	607	1065	739	158	1809	133	
Lane Group Flow (vph)	31	116	140	66	167	639	1121	778	166	1904	140	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			Free					2			6	
Detector Phase	7	4		3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	12.1	43.1		12.1	43.1	11.5	26.5	26.5	14.0	26.5	26.5	
Total Split (s)	13.0	44.0		13.0	44.0	14.0	59.0	59.0	14.0	59.0	59.0	
Total Split (%)	10.0%	33.8%		10.0%	33.8%	10.8%	45.4%	45.4%	10.8%	45.4%	45.4%	
Yellow Time (s)	3.7	3.7		3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	3.0	3.0		3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.8	4.2		4.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	8.0	21.6	130.0	8.1	24.2	30.6	72.4	72.4	13.0	54.8	54.8	
Actuated g/C Ratio	0.06	0.17	1.00	0.06	0.19	0.24	0.56	0.56	0.10	0.42	0.42	
v/c Ratio	0.30	0.40	0.09	0.33	0.51	0.84	0.42	0.71	0.51	0.94	0.20	
Control Delay	66.1	49.9	0.1	62.8	47.9	63.6	20.6	12.8	55.1	38.6	9.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	66.1	49.9	0.1	62.8	47.9	63.6	20.6	12.8	55.1	38.6	9.3	
LOS	E	D	А	E	D	E	С	В	E	D	A	
Approach Delay		27.4			52.2		29.0			38.0		
Approach LOS		С			D		С			D		
Queue Length 50th (m)	8.1	28.8	0.0	8.9	39.4	94.7	43.4	25.5	23.5	98.2	4.4	
Queue Length 95th (m)	19.1	40.0	0.0	16.8	52.9	m#180.2	78.2	m119.0	m31.0	#126.0	m12.0	
Internal Link Dist (m)		90.1			43.7		219.9			189.4		
Turn Bay Length (m)			60.0			160.0			150.0		70.0	
Base Capacity (vph)	105	540	1478	205	527	764	2683	1090	324	2030	695	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.30	0.21	0.09	0.32	0.32	0.84	0.42	0.71	0.51	0.94	0.20	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 150												
Control Type: Actuated-Coordinated	ł											
Maximum v/c Ratio: 0.94												
Intersection Signal Delay: 33.7				Int	ersection L	.OS: C						
Intersection Capacity Utilization 87.5	5%			IC	U Level of	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, que	eue may be	longer.									
Queue shown is maximum after	two cycles.											
m Volume for 95th percentile que	ue is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Road	d & Solandt F	Road										
01 02 (P)						10	-	04				95 1
						12-1		21				

Ø1	Ø2 (R)	🕈 Ø3	→ Ø4
14 s	59 s	13 s	44 s
05	Ø6 (R)	▶ Ø7	← Ø8
14 s	59 s	13 s	44 s

Solandt TIA Background 2026 AM (improved) 3: Legget Drive & Solandt Road

3: Legget Drive & Solandt	Road									AM.syn
	≯	→	1	ł	1	Ť	4	ţ	1	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	1	1.	3	1.	1	1.	1	•	1	
Traffic Volume (vph)	429	257	3	28	99	192	53	197	53	
Future Volume (vph)	429	257	3	28	99	192	53	197	53	
Lane Group Flow (vph)	452	522	3	38	104	261	56	207	56	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases		2		6		8		4		
Permitted Phases	2		6		8		4		4	
Detector Phase	2	2	6	6	8	8	4	4	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.4	33.4	33.4	33.4	29.2	29.2	29.2	29.2	29.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%	
Yellow Lime (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.1	3.1	3.1	3.1	2.8	2.8	2.8	2.8	2.8	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.1	-2.1	-2.1	-2.1	-2.1	
lotal Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag										
Lead-Lag Optimize?	Mono	Nono	Mono	Mono	Nono	Nono	Nono	Nono	Mono	
Act Effet Croop (c)	20.0	20.0			10.0	10.0	10.0	10.0	19.0	
Actuated a/C Ratio	29.0	29.0	20.4	20.4	10.0	10.0	10.0	10.0	10.0	
Actualed g/C Ratio	0.52	0.52	0.40	0.40	0.32	0.32	0.32	0.32	0.52	
	16.2	11 /	0.01	6.0	10.0	10.47	18.7	18.0	6.4	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
Total Delay	16.2	11.4	7.3	6.0	19.9	19.5	18.7	18.9	6.0	
	10.2 R	B	Δ	Δ	10.0 R	R	B	R	Δ	
Approach Delay	5	13 7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	61	5	19.6	U	16 7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Approach LOS		B		A		B		B		
Queue Length 50th (m)	28.9	26.6	0.1	1.2	7.7	19.2	4.0	15.6	0.0	
Queue Length 95th (m)	77.8	70.7	1.4	6.0	26.2	54.1	15.8	44.3	7.8	
Internal Link Dist (m)		82.0		169.8		205.2		214.4		
Turn Bay Length (m)			45.0		70.0		40.0		40.0	
Base Capacity (vph)	1215	1539	606	1602	837	1334	718	1393	1169	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.34	0.00	0.02	0.12	0.20	0.08	0.15	0.05	
Intersection Summary										
Cycle Length: 112.4										
Actuated Cycle Length: 55.7										
Natural Cycle: 65										
Control Type: Semi Act-Uncoord										
Maximum v/c Ratio: 0.68										
Intersection Signal Delay: 15.3				In	tersection L	OS: B				
Intersection Capacity Utilization 66.0%				IC	U Level of S	Service C				
Analysis Period (min) 15										
Splits and Phases: 3: Legget Drive &	& Solandt	Road								
402						*	04			20 20
66.2.0						46	28			

→ Ø2	1.5	▼ Ø4	
66.2 s		46.2 s	
▼ Ø6		1 Ø8	
66.2 s		46.2 s	

Solandt TIA Background 2026 AM (improved) 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										AM.syn
	٨	-	7	1	+	*	1	1	1	4	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		a	1		aî	1	3	***	1	55	***	1
Traffic Volume (vph)	63	26	9	38	12	188	90	2292	86	317	1664	123
Future Volume (vph)	63	26	9	38	12	188	90	2292	86	317	1664	123
Lane Group Flow (vph)	0	93	9	0	53	198	95	2413	91	334	1752	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	46.7	46.7	46.7	46.7	46.7	46.7	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	46.7	46.7	46.7	46.7	46.7	46.7	18.2	66.3	66.3	17.0	65.1	65.1
Total Split (%)	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	14.0%	51.0%	51.0%	13.1%	50.1%	50.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)		-2.7	-2.7		-2.7	-2.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		21.2	21.2		21.2	21.2	13.9	75.6	75.6	21.2	82.9	82.9
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.11	0.58	0.58	0.16	0.64	0.64
v/c Ratio		0.43	0.03		0.25	0.52	0.53	0.86	0.10	0.63	0.57	0.14
Control Delay		52.2	0.2		46.3	14.5	65.7	27.9	4.0	47.1	18.4	10.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		52.2	0.2		46.3	14.5	65.7	27.9	4.0	47.1	18.4	10.1
LOS		D	А		D	В	Е	С	А	D	В	В
Approach Delay		47.6			21.2			28.4			22.2	
Approach LOS		D			С			С			С	
Queue Length 50th (m)		23.8	0.0		13.2	7.8	24.4	181.9	0.5	49.0	76.0	7.4
Queue Length 95th (m)		32.4	0.0		20.4	24.7	43.5	#287.2	10.3	m#60.8	m87.8	m9.6
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		438	540		432	595	193	2802	869	530	3071	944
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.21	0.02		0.12	0.33	0.49	0.86	0.10	0.63	0.57	0.14
Interportion Summary												
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase Natural Cycle: 140	2:NBT and	6:SBT, Sta	rt of Green									
Control Type: Actuated-Coordinated	1											
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 25.8				In	tersection L	0S: C						
Intersection Capacity Utilization 84.2	2%			IC	LI Level of	Service E						
Analysis Period (min) 15	. / C				0 2010 2	Jooc _						
# 95th percentile volume exceeds	capacity, qu	eue may be	a longer.									
Oueue shown is maximum after t	two cycles	540 may 22	longe									
m Volume for 95th percentile que	le is metered	d by upstrea	ım signal.									
Splits and Phases: 4: March Road	d & Carling A	venue										
•ø1 🕴 🗖 ø2 (†	R)						4	Ø4				88 11
17 s 66.3 s	7						46.7	S				

Solandt TIA Background 2026 PM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry F	ox Driv	e										PM.syn
	≯	+	1	4	t	*	1	1	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	**	1	10	**	1	**	***	1	**	***	1
Traffic Volume (vph)	310	158	424	209	398	411	326	1816	107	96	797	145
Future Volume (vph)	310	158	424	209	398	411	326	1816	107	96	797	145
Lane Group Flow (vph)	326	166	446	220	419	433	343	1912	113	101	839	153
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	46.0	46.0	11.8	46.0	46.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	17.4	47.7	47.7	15.7	46.0	46.0	24.9	54.7	54.7	11.9	41.7	41.7
Total Split (%)	13.4%	36.7%	36.7%	12.1%	35.4%	35.4%	19.2%	42.1%	42.1%	9.2%	32.1%	32.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.4	36.3	36.3	11.7	34.6	34.6	19.9	57.1	57.1	8.9	46.2	46.2
Actuated g/C Ratio	0.10	0.28	0.28	0.09	0.27	0.27	0.15	0.44	0.44	0.07	0.36	0.36
v/c Ratio	0.97	0.18	0.78	0.75	0.47	0.82	0.69	0.90	0.16	0.45	0.49	0.24
Control Delay	100.7	34.1	28.3	74.4	40.7	35.1	61.3	51.5	16.6	65.6	35.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	100.7	34.1	28.3	74.4	40.7	35.1	61.3	51.5	16.6	65.6	35.9	2.2
LOS	F	С	С	E	D	D	E	D	В	E	D	A
Approach Delay		54.5			45.3			51.2			33.9	
Approach LOS	45.0	D	10.0	00.0	D	0	50.0	D	5 4	40.0	C	0.0
Queue Length 50th (m)	45.8	16.4	49.2	30.3	45.9	55.9	50.6	~144.5	5.1	13.8	/1.3	0.0
Queue Length 95th (m)	#76.9	25.3	91.2	#48.1	61.2	98.7	m53.1	m#220.0	m21.7	23.7	80.5	5.5
Turn Day Longth (m)	105.0	141.Z	60.0	60.0	123.0	75.0	160.0	1/9.2	0E 0	105.0	2/5.4	100.0
Page Canadity (unb)	105.0	1107	642	00.0	1000	75.0	10U.U	0110	00.0	105.0	1710	642
Starvetion Con Boduetn	335	0	043	292	1003	001	522	2110	/10	222	1710	043
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Poducod v/o Potio	0 07	0 15	0 60	0.75	0.30	0 72	0 66	0 00	0 16	0.45	0 40	0.24
	0.97	0.15	0.09	0.75	0.59	0.72	0.00	0.90	0.10	0.43	0.49	0.24
Intersection Summary												
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2	2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 125												
Control Type: Actuated-Coordinated												
Intersection Signal Delay: 47.2				امل	torpostion L	00.0						
Intersection Signal Delay, 47.2	4					CO. D Sonvico E						
Analysis Period (min) 15	0			10	O Level of a							
 Volume exceeds capacity, queue 	is theoretic	ally infinite.										
Queue shown is maximum after tw # 95th percentile volume exceeds ca	vo cycles. apacity, qu	eue may be	longer.									
Queue shown is maximum after tw	o cycles.		-									
m Volume for 95th percentile queue	is metered	d by upstrea	m signal.									
Splits and Phases: 1: March Road	& Terry Fo	x Drive										

Ø1	Ø2 (R) 🛡		√ Ø3	₩04
11.9 s	54.7 s		15.7 s	47.7 s
105		Ø6 (R)		Ø8
24.9 s	41	1.7 s	17.4 s	46 s

Solandt TIA Background 2026 PM (improved) 2: March Road & Solandt Road

2: March Road & Soland	lt Road	、 ·	,									PM.syn
	٠	+	1	4	+	1	Ť	1	1	ŧ	~	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	*	1	**	î.	**	***	1	55	***	1	
Traffic Volume (vph)	87	43	668	677	75	121	2027	78	45	1154	68	
Future Volume (vph)	87	43	668	677	75	121	2027	78	45	1154	68	
Lane Group Flow (vph)	92	45	703	713	312	127	2134	82	47	1215	72	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases		•	Free	•	· ·	•	_	2	•	•	6	
Detector Phase	7	4	1100	3	8	5	2	2	1	6	6	
Switch Phase	1	т		Ū	U	Ū	2	2		U	Ū	
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	12.5	13.5		12.5	10.0	11.5	20.0	20.0	14.0	20.0	20.0	
Total Split (a)	21.0	43.5		27.5	42.5	14.0	20.5	20.5	14.0	20.5	20.0	
Total Split (8)	31.3 24.10/	43.3		07.0 00.00/	49.7	14.0	00.00 00.00/	06.0%	14.0	0.00	06.0%	
	24.1%	33.5%		20.0%	30.2%	10.0%	20.9%	20.9%	10.0%	20.9%	20.9%	
Yellow Time (s)	3.7	3.7		3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	3.0	3.0		3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.8	4.2		4.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	17.7	130.0	32.0	32.0	11.7	59.2	59.2	9.4	54.6	54.6	
Actuated g/C Ratio	0.11	0.14	1.00	0.25	0.25	0.09	0.46	0.46	0.07	0.42	0.42	
v/c Ratio	0.50	0.19	0.48	0.89	0.66	0.43	0.97	0.11	0.20	0.60	0.10	
Control Delay	62.9	48.0	1.1	61.8	30.9	52.8	57.6	11.4	50.1	47.2	11.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.9	48.0	1.1	61.8	30.9	52.8	57.6	11.4	50.1	47.2	11.1	
105	F	D	A	F	С	D	F	В	D	D	В	
Approach Delay		10 4			52 4		55 7	_	-	45.3	_	
Approach LOS		B			D		F			D		
Queue Length 50th (m)	23.7	11 4	0.0	95.5	46.2	17 7	179 7	17	60	122.5	32	
Queue Length 95th (m)	40.6	18.7	0.0	#127.3	62.2	m25.6	#352.0	m8.5	m11.3	#167.8	m8.7	
Internal Link Dist (m)	40.0	Q0 1	0.0	1121.0	13.7	11120.0	210.0	110.0		180 /	110.7	
Turn Bay Length (m)		50.1	60.0		40.7	160.0	215.5		150.0	105.4	70.0	
Rase Capacity (uph)	3/1	533	1/77	Q1Q	636	202	210/	7/9	251	2022	680	
Staruation Con Boduato	041	0	1477	010	030	292	2134	0	201	2022	009	
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductin	0.07	0.09	0.49	0.07	0 40	0 42	0.07	0 11	0 10	0 60	0 10	
Reduced V/C Rallo	0.27	0.00	0.40	0.07	0.49	0.43	0.97	0.11	0.19	0.00	0.10	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Starl	t of Green									
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.97												
Intersection Signal Delay: 45.7				Int	ersection L	OS: D						
Intersection Capacity Utilization 93 8	%			IC	U Level of S	Service F						
Analysis Period (min) 15												
# 95th percentile volume exceeds	canacity que	ue may he	longer									
Queue shown is maximum after th	wo oveles	Suc may be	longer.									
m Volume for 95th percentile queu	le is metered	by upstrea	m signal.									
Splits and Phases: 2: March Road	I & Solandt F	Road										
Ø1 Ø2 (R)			4	Ø3				1 Ø4				25
14 s 35 s			37.5	s			4	3.5 s				

Ø1	Ø2 (R)	✓ Ø3	- b Ø4
14 s	35 s	37.5 s	43.5 s
05	Ø6 (R)	▶ _{Ø7}	Ø8
14 s	35 s	31.3 s 49.	7s

Solandt TIA Background 2026 PM (improved) 3: Legget Drive & Solandt Road

3: Legget Drive & Solandt	Road									PM.syn
	≁	+	1	+	1	Ť	4	ţ	~	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	×	î.	7	î.	×	î.	×	*	1	
Traffic Volume (vph)	56	32	51	260	290	114	7	264	446	
Future Volume (vph)	56	32	51	260	290	114	7	264	446	
Lane Group Flow (vph)	59	91	54	306	305	124	7	278	469	
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm	
Protected Phases		2		6	3	8		4		
Permitted Phases	2		6		8		4		4	
Detector Phase	2	2	6	6	3	8	4	4	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.4	33.4	33.4	33.4	11.2	29.2	29.2	29.2	29.2	
Total Split (s)	40.6	40.6	40.6	40.6	24.0	78.0	54.0	54.0	54.0	
Total Split (%)	34.2%	34.2%	34.2%	34.2%	20.2%	65.8%	45.5%	45.5%	45.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.1	3.1	3.1	3.1	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.4	-2.4	-2.4	-2.4	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag					Lead		Lag	Lag	Lag	
Lead-Lag Optimize?	News	N	NI	News	Yes	Nexa	Yes	Yes	Yes	
	None	None	None	None	None	None	None	None	None	
Act Effect Green (s)	20.9	20.9	21.0	21.0	38.0	37.0	22.7	22.7	22.7	
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.53	0.52	0.31	0.31	0.31	
V/C Rallo	0.29	0.10	0.10	0.00	0.55	0.14	10.02	0.50	0.74	
	27.4	12.0	23.3	29.2	12.4	7.0	19.0	24.2	10.0	
Total Dolay	27.4	12.0	0.0	20.0	12.4	0.0	10.0	24.2	18.0	
	21.4	12.0 R	23.3	29.2	12.4 R	Λ.0	19.0 R	24.2	10.0 R	
Approach Delay	U	18.1	U	28.3	D	11.0	D	20.3	D	
Approach LOS		B		20.0 C		R		20.0 C		
Queue Length 50th (m)	59	32	52	33.3	18 1	63	0.6	29.1	22.8	
Queue Length 95th (m)	21.5	17.2	18.5	83.7	44.9	18.2	3.9	66.9	74 1	
Internal Link Dist (m)	21.0	82.0	10.0	169.8	11.0	205.2	0.0	214.4		
Turn Bay Length (m)		02.0	45.0	100.0	70.0	200.2	40.0	2	15.0	
Base Capacity (vph)	385	879	663	945	674	1615	864	1313	1153	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.15	0.10	0.08	0.32	0.45	0.08	0.01	0.21	0.41	
Intersection Summary										
Cycle Length: 118.6										
Actuated Cycle Length: 72.2										
Natural Cycle: 75										
Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0 74										
Intersection Signal Delay: 19.4				Ini	tersection I	OS: B				
Intersection Capacity Utilization 73.3%				IC	U Level of S	Service D				
Analysis Period (min) 15				10						
Splits and Phases: 3: Legget Drive &	& Solandt	Road								
402			103	2		04				
40.6 -			24 -			T 2/1				

- 4 02	1 Ø3	₽ Ø4
40.6 s	24 s	54 s
₹Ø6	Ø8	
40.6 s	78 s	

Solandt TIA Background 2026 PM (improved) 4: March Road & Carling Avenue

Lane Conjunitors EBL EBL EBL EBL EBL WBL WBL WBR NBL NBT NBR SBL SBT SBR Lane Conground 13 30 124 19 323 34 1945 38 223 255 Lane Conground 0 13 30 124 19 323 34 1945 38 288 2232 255 Lane Conground 4 8 8 194 38 1944 38 284 2232 25 55 Lane Conground 4 4 8 8 5 2 2 1 6 6 Permited Phase 4 4 8 8 5 2 2 1 6 6 7 6 7 6 8 8 5 5 2 0 2 0 2 0 2 0 2 0 2 0 2 <th>4: March Road & Carling</th> <th>g Avenu</th> <th>е</th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>PM.syn</th>	4: March Road & Carling	g Avenu	е	-									PM.syn
Lame Conjunto EBL EBT EBB WEL WEL WEL NET NER SBB Tardin Kuham (veh) 26 13 30 124 19 329 34 1845 38 298 2232 50 Line Conception (vph) 0 41 32 0 1151 346 36 1942 33 314 2232 50 Line Conception (vph) 0 41 32 0 1151 346 36 1942 33 314 2239 53 Unit Type Perm NA Perm NA Perm NA Perm Perm Perm Perm Permited Phases 2 16 6 Steph Phase 4 4 8 8 5 2 1 6 6 5 </th <th></th> <th>٨</th> <th>-</th> <th>7</th> <th>1</th> <th>+</th> <th>*</th> <th>1</th> <th>1</th> <th>1</th> <th>4</th> <th>ţ</th> <th>~</th>		٨	-	7	1	+	*	1	1	1	4	ţ	~
Lane Configurations d Lind Counter (vph) 0	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Tafic Volme (vph) 26 13 30 124 19 329 34 1445 38 28 222 50 Citrue Volme (vph) 26 13 30 124 19 329 34 1445 38 28 222 50 Citrue Volme (vph) 20 41 32 0 15 34 6 36 1942 38 24 234 234 234 234 234 234 234 234 234	Lane Configurations		et.	1		et.	1	٦	***	1	ሻሻ	***	1
Exture Volume (vph) 26 13 30 124 19 329 34 1845 36 298 2212 50 Line Type Perm NA NA NA NA <td>Traffic Volume (vph)</td> <td>26</td> <td>13</td> <td>30</td> <td>124</td> <td>19</td> <td>329</td> <td>34</td> <td>1845</td> <td>36</td> <td>298</td> <td>2232</td> <td>50</td>	Traffic Volume (vph)	26	13	30	124	19	329	34	1845	36	298	2232	50
Lame Group Flow (vph) 0 41 32 0 151 346 36 1942 38 314 2349 53 Protected Phases 4 8 6 2 1 6 6 Protected Phases 4 4 8 8 5 2 1 6 6 Protected Phases 4 4 8 8 5 2 1 6 6 Detector Phase 4 4 8 8 8 5 2 1 6 6 Minimum binia (is) 10.0 </td <td>Future Volume (vph)</td> <td>26</td> <td>13</td> <td>30</td> <td>124</td> <td>19</td> <td>329</td> <td>34</td> <td>1845</td> <td>36</td> <td>298</td> <td>2232</td> <td>50</td>	Future Volume (vph)	26	13	30	124	19	329	34	1845	36	298	2232	50
Turn Type Perm NA Perm Prot <	Lane Group Flow (vph)	0	41	32	0	151	346	36	1942	38	314	2349	53
Protected Phases 4 8 5 2 1 6 Protected Phases 4 4 8 8 2 2 1 6 6 Detector Phase 4 4 8 8 5 2 2 1 6 6 Minimum Site (i) 10.0 10.0 10.0 10.0 10.0 10.0 30.5 </td <td>Turn Type</td> <td>Perm</td> <td>NA</td> <td>Perm</td> <td>Perm</td> <td>NA</td> <td>Perm</td> <td>Prot</td> <td>NA</td> <td>Perm</td> <td>Prot</td> <td>NA</td> <td>Perm</td>	Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Parmited Phases 4 4 8 8 2 6 Switch Phase 10.0 10.0 10.0 10.0 10.0 5.0 20.0 5.0 20.0 20.0 5.0 20.0 20.0 5.0 20.0 20.0 20.0 5.0 20.0 <td< td=""><td>Protected Phases</td><td></td><td>4</td><td></td><td></td><td>8</td><td></td><td>5</td><td>2</td><td></td><td>1</td><td>6</td><td></td></td<>	Protected Phases		4			8		5	2		1	6	
Detector Phase 4 4 4 8 8 8 5 2 2 1 1 6 6 6 Whinimum Shift (s) 100 100 100 100 100 100 5.0 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 5.0 200 200 200 5.0 200 200 5.0 200 200 200 200 200 200 200 200 200 2	Permitted Phases	4		4	8		8			2			6
Switch Phase Switch Phase 10.0 <th< td=""><td>Detector Phase</td><td>4</td><td>4</td><td>4</td><td>8</td><td>8</td><td>8</td><td>5</td><td>2</td><td>2</td><td>1</td><td>6</td><td>6</td></th<>	Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Minimum Sinki (s) 100 100 100 100 100 100 100 200 50 200 50 200 200 50 200 200 50 200 20	Switch Phase												
Minimum Spill (s) 4b.7 4	Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Iotal Spin (15) 4b./ 4b./ 4b./ 4b./ 4b./ 4b./ 4b./ 11.5 0.3.5 0.3.5 0.1.6 0.5 0.1.6 0.5 0.1.6 0.5 0.1.6 0.5 0.1.6 0.5 0.1.6 0.5 0.1.6 0.5 0.1.6	Minimum Split (s)	46.7	46.7	46.7	46.7	46.7	46.7	11.5	30.5	30.5	11.5	30.5	30.5
Lotal Split (%) 33.3% 33.9% 35.9% 35.9% 35.9% 55.7% 45.9% 44.6% 4.6	Total Split (s)	46.7	46.7	46.7	46.7	46.7	46.7	11.5	63.5	63.5	19.8	/1.8	/1.8
Telow Inne (s) 3.7 3.7 3.7 3.7 3.7 3.7 3.7 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6	Total Split (%)	35.9%	35.9%	35.9%	35.9%	35.9%	35.9%	8.8%	48.8%	48.8%	15.2%	55.2%	55.2%
val-red line (s) set Time A (s) set Time A (s) set Time A (s) set A (s)	Yellow Time (s)	3.7	3./	3.7	3.7	3.7	3.7	4.0	4.0	4.0	4.6	4.6	4.0
Los I mill Autor (b) Lead Lag Chai Los Times (c) Lead Lag Chai Los Times (c) Lead Lag Chai Los Times (c) Recall Mode Act Eff Green (c) Recall Mode None None None None None None None None	All-Red Time (S)	5.0	3.0	3.0	3.0	3.0	3.U 2.7	1.9	1.9	1.9	1.9	1.9	1.9
Undard Strinke (s) 4.0<	Lost Time Adjust (s)		-2.1	-2.1		-2.1	-2.1	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Lead Lag Optimize? Recall Mode Act Eff of Green (s) Act Eff of Green Act Eff Of Sin Freed Condinated Maximum Aff Act Condinated Maximum Aff Act Condinated Maximum Aff Act Condinated Act Eff Of Green Act Eff Of Green A	Lood/Log		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Label and Mode None None None None None None None None None CHas Tes Tes <t< td=""><td>Lead/Lag</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Voc</td><td>Lay</td><td>Lay</td><td>Voc</td><td>Lay</td><td>Lay</td></t<>	Lead/Lag							Voc	Lay	Lay	Voc	Lay	Lay
Note	Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Nucleic (op) 20.1 20.0 20.0 20.0 10.5 <td>Act Effet Green (s)</td> <td>NONE</td> <td>28.1</td> <td>28.1</td> <td>NULLE</td> <td>28.8</td> <td>28.8</td> <td>0.5</td> <td>70.5</td> <td>70.5</td> <td>18.7</td> <td>8/ 8</td> <td>8/ 8</td>	Act Effet Green (s)	NONE	28.1	28.1	NULLE	28.8	28.8	0.5	70.5	70.5	18.7	8/ 8	8/ 8
bitalistic go fields 0.14 0.02 0.24 0.24 0.24 0.24 0.24 0.25 0.26 0.20 0.26 <td< td=""><td>Actuated a/C Ratio</td><td></td><td>0.22</td><td>0.22</td><td></td><td>0.22</td><td>0.22</td><td>0.07</td><td>0.54</td><td>0.54</td><td>0.14</td><td>04.0</td><td>0.65</td></td<>	Actuated a/C Ratio		0.22	0.22		0.22	0.22	0.07	0.54	0.54	0.14	04.0	0.65
0.1.1 0.0.1 <t< td=""><td>v/c Ratio</td><td></td><td>0.22</td><td>0.22</td><td></td><td>0.22</td><td>0.22</td><td>0.07</td><td>0.54</td><td>0.04</td><td>0.14</td><td>0.05</td><td>0.05</td></t<>	v/c Ratio		0.22	0.22		0.22	0.22	0.07	0.54	0.04	0.14	0.05	0.05
Ourse Delay 0.0	Control Delay		37.4	0.00		49.7	41.0	63.7	26.8	0.04	63.6	20.0	1.8
Total Delay 37.4 0.3 49.7 41.0 63.7 26.8 0.1 63.6 20.0 1.8 LOS D A D D E C A E B A Approach LOS C D C C C 24.7 C Approach LOS C D C C C C C C D 24.7 C D 24.7 C D C C C D C C C D D Bate Link Dist (m) 126.6 0.0 36.4 55.5 93.3 10.0 #56.5 70.0 190.0 25.0 Base Capacity (vph) 453 57.6 419 57.7 122 2613 861 467 3141 97.4 0.0 0	Queue Delay		0.0	0.0		0.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Order Decky Dir Order Dor E. Dor Order Dorder Dorder <thdorder< th=""></thdorder<>	Total Delay		37.4	0.0		49.7	41.0	63.7	26.8	0.0	63.6	20.0	1.8
Approach Delay 21.1 43.7 27.0 27.0 24.7 Approach LOS C D C C C C Queue Length 50th (m) 9.0 0.0 36.4 55.4 9.3 145.6 0.0 45.2 105.2 0.0 Queue Length 95th (m) 16.6 0.0 51.0 80.6 21.5 193.9 0.0 m#61.4 135.7 m1.7 Internal Link Dist (m) 128.6 308.2 130.8 253.3 5 Tum Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 453 576 419 577 122 2613 861 467 3141 974 Starvation Cap Reductin 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Storage Cap Reductin 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Storage Cap Reductin 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced v/c Ratio 0.09 0.06 0.36 0.60 0.30 0.74 0.04 0.67 0.75 0.05 Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection LOS: C Intersection LOS: C Intersection LOS: C Intersection LOS: C Intersection Summary Volume for 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: 4: March Road & Carting Avenue S S S S S S S S			07.4 D	0.0 A		 D	-1.0 D	50.7 F	20.0 C	0.1 A	60.0 F	20.0 B	1.0 A
Approach LOS C D C C C C C C C C C C C C C C C C C	Approach Delay		21.1	~		43.7	5	-	27.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	_	24.7	7.
Outeue Length 50th (m) 9.0 0.0 36.4 55.4 9.3 145.6 0.0 45.2 105.2 0.0 Outeue Length 95th (m) 16.6 0.0 51.0 80.6 21.5 193.9 0.0 m#61.4 135.7 m1.7 Internal Link (m) 128.6 308.2 130.8 70.0 190.0 25.0 Base Capacity (vph) 453 57.6 419 57.7 122 2613 861 467 3141 974 Starvation Cap Reductn 0<	Approach LOS		C			D			C			C	
Queue Length 95th (m) 16.6 0.0 51.0 80.6 21.5 193.9 0.0 m#61.4 135.7 m1.7 Internal Link Dist (m) 128.6 308.2 130.8 353.3 141 974.5 350.8 250.0 350.0 0.0 0 </td <td>Queue Length 50th (m)</td> <td></td> <td>9.0</td> <td>0.0</td> <td></td> <td>36.4</td> <td>55.4</td> <td>9.3</td> <td>145.6</td> <td>0.0</td> <td>45.2</td> <td>105.2</td> <td>0.0</td>	Queue Length 50th (m)		9.0	0.0		36.4	55.4	9.3	145.6	0.0	45.2	105.2	0.0
Internal Link Dist (m) 128.6 308.2 130.8 353.3 Tum Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 453 576 419 577 122 2613 861 467 3141 974 Starvation Cap Reductn 0 <td>Queue Length 95th (m)</td> <td></td> <td>16.6</td> <td>0.0</td> <td></td> <td>51.0</td> <td>80.6</td> <td>21.5</td> <td>193.9</td> <td>0.0</td> <td>m#61.4</td> <td>135.7</td> <td>m1.7</td>	Queue Length 95th (m)		16.6	0.0		51.0	80.6	21.5	193.9	0.0	m#61.4	135.7	m1.7
Turn Bay Length (m) 30.0 50.0 95.0 70.0 190.0 25.0 Base Capacity (vph) 453 576 419 577 122 2613 861 467 3141 974 Starvation Cap Reductn 0	Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Base Capacity (vph) 453 576 419 577 122 2613 861 467 3141 974 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td></td> <td>453</td> <td>576</td> <td></td> <td>419</td> <td>577</td> <td>122</td> <td>2613</td> <td>861</td> <td>467</td> <td>3141</td> <td>974</td>	Base Capacity (vph)		453	576		419	577	122	2613	861	467	3141	974
Spillback Cap Reductn 0	Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn 0	Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio 0.09 0.06 0.36 0.60 0.30 0.74 0.04 0.67 0.75 0.05 Intersection Summary Cycle Length: 130 Cycle Lengt	Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 120 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection LOS: C Intersection Capacity Utilization 80.0% Intersection LOS: C Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue Intersection Capacity Intersection Capacity Intersection Capacity In	Reduced v/c Ratio		0.09	0.06		0.36	0.60	0.30	0.74	0.04	0.67	0.75	0.05
Cycle Length: 130 Actuated Cycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 120 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue 91 92 93 95 95 95 95 95 95 95 95 95 95	Intersection Summary												
Actuated Čycle Length: 130 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 120 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue Ø1 Ø2 (R) 19.8 s Ø5 Ø6 (R)	Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green Natural Cycle: 120 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue 01 92 (R) 95 95 95 95 95 95 95 95 95 95 95 95 95	Actuated Cycle Length: 130												
Natural Cycle: 120 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue 91 92 (R) 93 95 95 95 95 95 95 95 95 95 95 95 95 95	Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	t of Green									
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue	Natural Cycle: 120												
Maximum v/c Ratio: 0.80 Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue 91 92 (R) 19.8 s 63.5 s 46.7 s 46.7 s	Control Type: Actuated-Coordinated												
Intersection Signal Delay: 27.3 Intersection LOS: C Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue 201 202 (R) 19.8 s 63.5 s 46.7 s 204	Maximum v/c Ratio: 0.80												
Intersection Capacity Utilization 80.0% ICU Level of Service D 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: 4: March Road & Carling Avenue yo1 02 (R) 46.7 s 46.7 s	Intersection Signal Delay: 27.3				In	tersection L	OS: C						
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: 4: March Road & Carling Avenue 201 202 (R) 19.8 s 63.5 s 46.7 s 46.7 s 204	Intersection Capacity Utilization 80.0	1%			IC	U Level of S	Service D						
 # 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: 4: March Road & Carling Avenue ✓ Ø1 Ø2 (R) Ø4 Ø5 Ø6(R) Ø6(R) 	Analysis Period (min) 15												
Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 4: March Road & Carling Avenue 01 02 (R) 19.8 s 63.5 s 46.7 s 63.5 s 63.5 s 63.5 s 63.5 s 646.7 s 63.5 s 646.7 s 646	# 95th percentile volume exceeds	capacity, qu	eue may be	e longer.									
Splits and Phases: 4: March Road & Carling Avenue	Queue shown is maximum after t m Volume for 95th percentile queu	wo cycles. ie is metered	d by upstrea	ım signal.									
Ø1 Ø2 (R) 19.8 s 63.5 s Ø5 Ø6 (R)	Splits and Phases: 4: March Road	l & Carlino A	venue										
19.8 s 63.5 s 46.7 s 46.7 s		2 (P)	-					4	174				53
▲ Ø5 🕴 Ø((R))	19.8 s 63.5 s	2 (K)						46.7	S S				
	▲ Ø5 🕴 Ø((R)							-	Ø8				

46.7 s

71.8 s



Appendix E - Total Projected Conditions Output Data





Solandt TIA Future Total 2021 AM 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	*	**	**	*	**	***	1	*	***	#
Traffic Volume (vph)	105	541	289	70	138	56	282	532	169	373	1312	178
Future Volume (vph)	105	541	289	70	138	56	282	532	169	373	1312	178
Lane Group Flow (yph)	111	569	304	74	145	59	202	560	178	303	1381	187
	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	i onn	3	8	i onn	5	2	T UIIII	1	6	
Permitted Phases	,	т	4	U	U	8	U	2	2		Ū	6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase		•	•	Ū	Ŭ	Ŭ	U	-	-		v	Ű
Minimum Initial (s)	50	10.0	10.0	50	10.0	10.0	50	20.0	20.0	50	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Solit (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	3.7	37	37	37	37	37	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	21	21	2.3	21	21
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-27	-27	-2.9	-27	-27
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	Lead	l an	l an	l ead	l an	l an	Lead	l an	l an	Lead	l an	l an
Lead-Lag Ontimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.5	32.5	32.5	10.8	29.3	29.3	19.1	43.0	43.0	30.2	54 1	54 1
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.33	0.33	0.23	0 42	0 42
v/c Ratio	0.39	0.68	0.52	0.27	0.19	0.13	0.62	0.35	0.30	1.01	0.69	0.26
Control Delay	59.9	48.0	7.2	58.1	39.1	0.6	59.0	40.1	13.8	98.1	35.5	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	48.0	7.2	58.1	39.1	0.6	59.0	40.1	13.8	98.1	35.5	5.2
LOS	E	D	A	E	D	A	E	D	В	F	D	A
Approach Delay		36.7			36.0			41.0			45.2	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	14.7	74.5	0.0	9.7	16.6	0.0	43.8	33.4	6.7	~116.2	113.8	0.0
Queue Length 95th (m)	24.7	88.6	22.7	17.7	24.1	0.0	57.9	55.7	33.1	#209.3	148.3	16.9
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	300	980	634	300	980	532	525	1593	599	389	2005	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.58	0.48	0.25	0.15	0.11	0.57	0.35	0.30	1.01	0.69	0.26
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 114 (88%), Referenced to p	hase 2:NBT a	and 6:SBT.	Start of Gre	en								
Natural Cycle: 110												
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 1.01	-											
Intersection Signal Delay: 41.6				In	tersection L	OS: D						
Intersection Capacity Utilization 85	.1%			IC	U Level of S	Service E						
Analysis Period (min) 15												
~ Volume exceeds capacity, que	ue is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	s capacity, qu	eue may be	e longer.									
Queue shown is maximum after	two cycles.	•	-									
0.111 1.01 1.11	10 T -	D .										
Splits and Phases: 1: March Roa	a & Terry Fo	x Drive										

Ø1	Ø2 (R)	1 03	→ ₽Ø4
25 s	47 s	16 s	42 s
1 Ø5	🛛 🚽 Ø6 (R)	▲ Ø7	4 [®] Ø8
25 s	47 s	16 s	42 s

Solandt TIA Future Total 2021 AM 2: March Road & Solandt Road

are Group EBU EBT EBT VBL WBL WBT NBC NBC SBR 2811 SBR are Configurations (vph) 29 110 128 74 121 607 898 806 167 1434 133 iture Youne (vph) 29 110 129 74 121 607 898 806 167 1434 133 iture Youne (vph) 31 116 138 76 168 633 945 851 176 1454 133 are Group Flow (vph) 31 116 138 76 168 633 945 851 176 1509 140 Um Type Prot NA Free Prot NA prrph NA Perm Perm NA Perm Protected Phases 7 4 7 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 7 4 7 8 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 7 4 7 8 7 8 8 8 808 167 17 134 151 128 7 8 1509 140 Um Type Prot NA Free Prot NA prrph NA Perm Perm NA Perm NA Vermited Phases 7 4 7 8 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 8 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 8 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 8 3 8 5 2 2 6 6 6 Detect Phase 7 4 7 7 1 7 17 17 17 17 17 17 17 17 17 17 1		٨	+	1	1	ł	1	t	1	1	Ļ	~	
ane Configurations	Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Trafic Veninge (uph) 29 110 129 74 121 607 898 806 167 1434 133 Linur Syne (uph) 29 110 129 74 121 607 898 806 167 1434 133 Linur Syne (uph) 29 110 129 74 121 607 898 806 167 1434 133 Linu Type Prot NA Pres Prot NA Pres Prot NA Pres Pres NA P	Lane Configurations	5	٠	1	**	1.	3	**	1	3	**	1	
Eutre Volume (right) 29 110 129 74 121 607 608 606 617 1434 133 and Group Flows Prot NA Free Prot NA pront NA Perm NA NA Perm NA Suiti <th< td=""><td>Traffic Volume (vph)</td><td>29</td><td>110</td><td>129</td><td>74</td><td>121</td><td>607</td><td>898</td><td>808</td><td>167</td><td>1434</td><td>133</td><td></td></th<>	Traffic Volume (vph)	29	110	129	74	121	607	898	808	167	1434	133	
ane Group Flow (ph) 31 116 136 78 168 639 945 851 17.6 1509 140 Throng the Phases 7 4 74 74 78 78 168 639 945 851 76 150 97 Protected Phases 7 4 74 78 78 168 52 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 Detector Phase 7 4 74 78 78 2 2 2 6 6 6 78 78 78 78 78 78 78 78 78 78 78 78 78	Future Volume (vph)	29	110	129	74	121	607	898	808	167	1434	133	
Funct NA Free Port NA permit NA permit <th< td=""><td>Lane Group Flow (vph)</td><td>31</td><td>116</td><td>136</td><td>78</td><td>168</td><td>639</td><td>945</td><td>851</td><td>176</td><td>1509</td><td>140</td><td></td></th<>	Lane Group Flow (vph)	31	116	136	78	168	639	945	851	176	1509	140	
Processed 7 4 3 8 5 2 6 Detector Phase 7 4 100 5.0 10.0 2.0 2.0 2.0 2.00 20.0 Minimum Initial (6) 5.0 10.0 5.0 10.0 5.0 20.0 20.0 20.0 20.0 20.0 Minimum Solit (6) 13.0 3.2 13.0 32.0 39.0 85.0 85.0 86.0 46.0 46.0 46.0 46.0 46.0 10.0 50.2 2.3 2.3 2.4 4.5 4.6 4	Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Permitted Phases Free 2 2 2 6 6 Switch Phase 3 8 5 2 2 6 6 6 Switch Phase 10.0 5.0 10.0 5.0 20.0	Protected Phases	7	4		3	8	5	2			6		
Detector Phase 7 4 3 8 5 2 2 6 6 6 Winimum Split (s) 5.0 10.0 5.0 10.0 5.0 20.0<	Permitted Phases			Free			2		2	6		6	
Switch Phase Minimum Initial (s) 5.0 10.0 5.0 10.0 5.0 20.0 20.0 20.0 20.0 20.0 20.0 1001 Minimum Split (s) 10.9 31.5 10.9 31.5 11.3 26.3 26.3 26.3 26.3 26.3 26.3 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10	Detector Phase	7	4		3	8	5	2	2	6	6	6	
Minimum Dinital (s) 5.0 10.0 5.0 10.0 5.0 20.0 20.0 20.0 20.0 20.0 20.0 20	Switch Phase												
Minimum Split (s) 10.9 31.5 10.9 31.5 11.3 26.3 26.3 26.3 26.3 26.3 26.3 26.3 26	Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Total Spin (s) 13.0 32.0 13.0 32.0 39.0 85.0 85.0 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46	Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (%) 10.0% 24.6% 10.0% 24.6% 30.0% 65.4% 65.4% 63.4% 33.4% 35.4% 55.4% Fellow Time (s) 2.6 3.2 2.6 3.2 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	Total Split (s)	13.0	32.0		13.0	32.0	39.0	85.0	85.0	46.0	46.0	46.0	
Yelow Time (s) 3.3 3.3 3.3 3.3 3.3 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6	Total Split (%)	10.0%	24.6%		10.0%	24.6%	30.0%	65.4%	65.4%	35.4%	35.4%	35.4%	
Wi-Red Time (s) 26 3.2 2.6 3.2 1.7	Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
Lest Time Adjust (s) 1.9 2.5 1.23 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Total Last Time (s) 4.0	Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Leadid ag Lead Lag Lead Lag Lead Lag Lead Lag Lead Lag	Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Land-Lag Optimize? Yes Yes<	Lead/Lag	Lead	Lag		Lead	Lag	Lead			Lag	Lag	Lag	
Recall Mode None None None None None None C-Max C-Max <t< td=""><td>Lead-Lag Optimize?</td><td>Yes</td><td>Yes</td><td></td><td>Yes</td><td>Yes</td><td>Yes</td><td></td><td></td><td>Yes</td><td>Yes</td><td>Yes</td><td></td></t<>	Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes	Yes	Yes	
Add Effet Green (s) 8.6 19.5 130.0 8.8 22.1 92.1	Recall Mode	None	None		None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Achaele g)C Ratio 0.07 0.15 1.00 0.07 0.17 0.71 0.71 0.71 0.71 0.71	Act Effct Green (s)	8.6	19.5	130.0	8.8	22.1	92.1	92.1	92.1	42.0	42.0	42.0	
v/c Ratio 0.28 0.44 0.09 0.35 0.57 0.98 0.40 0.69 1.02 1.39 0.25 Control Delay 64.3 54.1 0.1 62.5 53.3 33.6 3.0 7.5 97.4 208.1 4.5 Cauce Delay 0.0	Actuated g/C Ratio	0.07	0.15	1.00	0.07	0.17	0.71	0.71	0.71	0.32	0.32	0.32	
Control Delay 64.3 54.1 0.1 62.5 55.3 33.6 3.0 7.5 97.4 208.1 4.5 Develo Delay 0.0	v/c Ratio	0.28	0.44	0.09	0.35	0.57	0.98	0.40	0.69	1.02	1.39	0.25	
Dueue Delay 0.0	Control Delay	64.3	54.1	0.1	62.5	53.3	33.6	3.0	7.5	97.4	208.1	4.5	
Total Delay 64.3 64.1 0.1 62.5 53.3 33.6 3.0 7.5 97.4 208.1 4.5 LOS E D A E D C A F F A Approach Delay 29.3 56.2 12.6 181.8 F A Approach LOS C E B F A B F A Queue Length 50th (m) 81.1 28.7 0.0 10.5 40.2 -167.0 39.5 84.2 -48.8 ~287.6 0.0 Queue Length 95th (m) 18.9 45.1 0.0 19.1 60.6 m#163.2 m18.1 m14.8 m#3.0 #32.2.0 m6.1 Intersection Cap Reductn 0 <td< td=""><td>Queue Delay</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>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td></td></td<>	Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LOS E D A E D C A F F A Approach Delay 29.3 56.2 12.6 181.8 Approach LOS F B F F A Queue Length 50th (m) 8.1 28.7 0.0 10.5 40.2 ~167.0 39.5 84.2 ~48.8 ~287.6 0.0 Queue Length 50th (m) 18.9 45.1 0.0 19.1 60.6 m#f63.2 mt8.1 mt4.8 m#93.0 #322.0 m6.1 Dueue Length 50th (m) 18.9 45.1 0.0 19.1 60.6 m#f63.2 mt8.3 189.4 Turn Bay Length (m) 60.0 160.0 150.0 70.0 33.5 56.8 1230 172 1083 55.8 Starvation Cap Reducth 0	Total Delay	64.3	54.1	0.1	62.5	53.3	33.6	3.0	7.5	97.4	208.1	4.5	
Approach Delay 29.3 56.2 12.6 181.8 Approach LOS C E B F Ducue Length 50th (m) 18.9 45.1 0.0 19.1 60.6 m#163.2 m18.1 m14.8 m#93.0 #322.0 m6.1 Ducue Length 95th (m) 18.9 45.1 0.0 19.1 60.6 m#163.2 m18.1 m14.8 m#93.0 #322.0 m6.1 Ducue Length 95th (m) 18.9 45.1 0.0 19.1 60.6 m#163.2 m18.1 m14.8 m#93.0 #322.0 m6.1 Ducue Length (m) 60.0 150.0 150.0 70.0 3ase Capacity (vph) 116 380 14.78 225 372 651 2375 1230 172 1083 558 Stavation Cap Reductn 0	LOS	E	D	А	E	D	С	А	А	F	F	А	
Approach LOS C E B F Queue Length 50th (m) 8.1 28.7 0.0 10.5 40.2 ~167.0 39.5 84.2 ~48.8 ~287.6 0.0 Queue Length 50th (m) 18.9 45.1 0.0 19.1 60.6 m#16.3 m#14.8 m#93.0 #322.0 m6.1 Turm Bay Length (m) 60.0 160.0 160.0 150.0 70.0 Base Capacity (vph) 116 380 147.8 225 372 651 2375 1230 172 1083 558 Starvation Cap Reductn 0	Approach Delay		29.3			56.2		12.6			181.8		
Ducue Length 50th (m) 8.1 28.7 0.0 10.5 40.2 -167.0 39.5 84.2 -48.8 ~287.6 0.0 Ducue Length 95th (m) 18.9 45.1 0.0 19.1 60.6 m#16.32 m18.1 m14.8 m#93.0 #322.0 m6.1 Turm Bay Length (m) 60.0 160.0 150.0 70.0 38.6 23.75 1230 172 1083 55.8 Starvation Cap Reductn 0<	Approach LOS		С			E		В			F		
Queue Length 95th (m) 18.9 45.1 0.0 19.1 60.6 m#163.2 m18.1 m14.8 m#93.0 #322.0 m6.1 Internal Link Dist (m) 90.1 43.7 219.9 189.4 189.4 Um Bay Length (m) 60.0 160.0 150.0 70.0 Base Capacity (vph) 116 380 1478 225 372 651 2375 1230 172 1083 558 Starvation Cap Reductn 0	Queue Length 50th (m)	8.1	28.7	0.0	10.5	40.2	~167.0	39.5	84.2	~48.8	~287.6	0.0	
Internal Link Dist (m) 90.1 43.7 219.9 189.4 Turm Bay Length (m) 60.0 160.0 70.0 Jase Capacity (vph) 116 380 1478 225 372 651 2375 1230 172 1083 558 Starvation Cap Reductn 0	Queue Length 95th (m)	18.9	45.1	0.0	19.1	60.6	m#163.2	m18.1	m14.8	m#93.0	#322.0	m6.1	
Turn Bay Length (m) 60.0 160.0 150.0 70.0 Base Capacity (vph) 116 380 1478 225 372 651 2375 1230 172 1083 558 Starvation Cap Reductn 0	Internal Link Dist (m)		90.1			43.7		219.9			189.4		
Base Capacity (vph) 116 380 1478 225 372 651 2375 1230 172 1083 558 Starvation Cap Reductn 0	Turn Bay Length (m)			60.0			160.0			150.0		70.0	
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td>116</td> <td>380</td> <td>1478</td> <td>225</td> <td>372</td> <td>651</td> <td>2375</td> <td>1230</td> <td>172</td> <td>1083</td> <td>558</td> <td></td>	Base Capacity (vph)	116	380	1478	225	372	651	2375	1230	172	1083	558	
Spillback Cap Reductin 0 <td>Starvation Cap Reductn</td> <td>0</td> <td></td>	Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn 0	Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio 0.27 0.31 0.09 0.35 0.45 0.98 0.40 0.69 1.02 1.39 0.25 Intersection Summary Cycle Length: 130	Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Intersection Summary Cycle Length: 130 Actuated Cycle Length: 130 Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green Vatural Cycle: 150 Control Type: Actuated-Coordinated Waximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Reduced v/c Ratio	0.27	0.31	0.09	0.35	0.45	0.98	0.40	0.69	1.02	1.39	0.25	
Cycle Length: 130 Cycle Length: 130 Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection LOS: F Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Intersection Summary												
Actuated Cycle Length: 130 Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green Natural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection LOS: F Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Cycle Length: 130												
Matural Cycle: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green Vatural Cycle: 150 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection LOS: F Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Actuated Cycle Length: 130												
Natural Cycle: 15 0 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection LOS: F Intersection Capacity Utilization 106.6% Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Offset: 15 (12%) Referenced to nha	se 2·NRTL a	and 6:SBTI	Start of Gr	en								
Addition Syster. 199 Control Type: Actuated-Coordinated Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection LOS: F ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Natural Cycle: 150	00 2.11D I C (0011								
Maximum v/c Ratio: 1.39 Intersection Signal Delay: 80.3 Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Control Type: Actuated-Coordinated												
Intersection Signal Delay: 80.3 Intersection LOS: F Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Maximum v/c Ratio: 1 39												
Intersection Capacity Utilization 106.6% ICU Level of Service G Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. 9 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. N Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Intersection Signal Delay: 80.3				Int	ersection I	OS F						
Analysis Period (min) 15 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	Intersection Capacity Litilization 106	6%			ICI		Service G						
 Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Analysis Period (min) 15	.0 70			101								
Queue shown is maximum after two cycles. # 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: 2: March Road & Solandt Road		a is theoretic	ally infinite										
yest percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. N Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	Quouo shown is maximum after t		any minine.										
Queue shown is maximum after two cycles. n Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road	# 95th percentile volume exceede	canacity au		longer									
Weile shown is maximum alter two cycles. m Volume for 95th percentile queue is metered by upstream signal. Splits and Phases: 2: March Road & Solandt Road		capacity, qu	eue may be	longer.									
Splits and Phases: 2: March Road & Solandt Road	Molume for 95th percentile quou	wo cycles. In is meteror	hy unetree	m signal									
Splits and Phases: 2: March Road & Solandt Road	m volume tor abut percentile queu		i ny upsilea	ni siyilal.									
	Splits and Phases: 2: March Road	I & Solandt F	Road										
	(m)								03	-	4		



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Solandt TIA Future Total 2021 AM 3: Legget Drive & Solandt Road

Lane Group EBL EBT WBL WBT NBL NBT SBL SBT Lane Configurations 3 Lane Configurations 4 Lane Configurations 4		٠	+	4	t	1	t	1	ţ	
Lare Configurations	Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Tradits Quinty (ph) 430 257 3 28 103 183 53 188 Larre Group Flow (ph) 433 524 3 38 108 252 56 258 Larre Group Flow (ph) 433 524 3 38 108 252 56 258 Permited Phases Perm NA Perm NA Perm NA Perm PA Prombated Phases 2 6 6 8 4 Detector Phase 2 7 6 8 8 4 Detector Phase 2 7 6 8 8 4 Detector Phase 2 7 2 6 6 8 8 4 Detector Phase 2 7 2 6 7 8 8 4 Minimum Spit (s) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Lane Configurations	*	Δ.	*	Δ.	*	Δ.	*	Δ.	
Fune Youne Yoph) 430 257 3 28 103 183 53 188 Law Group Flaw (vph) 433 527 3 28 103 183 53 188 Law Group Flaw (vph) 433 527 3 28 103 282 55 288 Turn Type Perm NA Perm NA Perm NA Perm NA Permited Plases 2 6 6 8 4 4 Deletch Plases 2 7 6 6 8 4 4 Deletch Plases 2 7 6 6 8 4 4 Deletch Plases 2 7 6 6 8 4 4 Deletch Plase 2 7 6 6 8 4 4 Deletch Plase 2 2 2 6 6 8 8 4 4 Deletch Plase 2 2 2 52 252 252 252 252 252 252 252 2	Traffic Volume (vph)	430	257	3	28	103	183	53	188	
Lane Group Flow ("ph) 433 524 3 38 108 222 56 283 Tun Type Perm NA Perm Pathology 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Future Volume (vph)	430	257	3	28	103	183	53	188	
Turn Type: Turn Type: </td <td>Lane Group Flow (vph)</td> <td>453</td> <td>524</td> <td>3</td> <td>38</td> <td>108</td> <td>252</td> <td>56</td> <td>258</td> <td></td>	Lane Group Flow (vph)	453	524	3	38	108	252	56	258	
Protectard Phases 1 Pane 1 Pa		Perm	NA	Perm	NA	Perm	NA	Perm	NA	
Deminited Phases 2 2 6 8 4 4 Delector Phase 2 2 6 6 8 8 4 4 Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 Minimum Initial (s) 10.0 10.0 10.0 10.0 10.0 10.0 Minimum Initial (s) 66.2 66.2 66.2 46.2 46.2 46.2 46.2 Total Spit (%) 58.9% 58.9% 58.9% 41.1% 41.1% 41.1% 41.1% Vieto Spit (%) 52.9 2.9	Protected Phases		2		6	T UIIII	8	T UIII	4	
Definition in the set of the set	Permitted Phases	2	2	6	Ū	8	Ū	4	-	
Switch Phase L C <thc< th=""> C C <thc< th=""> <th< td=""><td>Detector Phase</td><td>2</td><td>2</td><td>6</td><td>6</td><td>8</td><td>8</td><td>4</td><td>4</td><td></td></th<></thc<></thc<>	Detector Phase	2	2	6	6	8	8	4	4	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Switch Phase	2	2	Ū	Ū	Ū	Ū	т	-	
Minimum Bank (y) 0 25 2 2 <th2< th=""> 2 2 2<</th2<>	Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
minimum optin (b) bit 2 bit 2 </td <td>Minimum Split (s)</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td>25.2</td> <td></td>	Minimum Split (s)	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	
Dotal Split (V) DO B DO B <thdo b<="" th=""> <thdo b<="" th=""> DO B DO B<</thdo></thdo>	Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	
Data Day (a) Dotating Dotating Dotating Dotating Triving Trivin	Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41 1%	41 1%	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Vellow Time (s)	30.370	30.570	30.370	30.370	23	33	33	33	
Animeted interlet(s) Last Time A(just (s) Last Last Last Last Last Last Last Last	All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	20	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Lost Time Adjust (c)	2.5	2.5	2.5	2.5	2.5	2.5	2.3	2.5	
Ubail cost nime (s) +.0 A D <thd< th=""> D D <thd< th=""></thd<></thd<>	Total Lost Time (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Lead-Lag Optimize? Recall Mode Act EffG Green (s) Act EffG Green (s) Act EffG Green (s) Actuated g/C Ratio 0.52 0.52 0.52 0.52 0.45 0.01 0.05 0.36 0.45 0.19 0.46 Control Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Decail Mode None None <td>Lead Lag Optimize?</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lead Lag Optimize?									
Note Note <th< td=""><td></td><td>Nono</td><td>Nono</td><td>Nono</td><td>Mono</td><td>Nono</td><td>Nono</td><td>Nono</td><td>Nono</td><td></td></th<>		Nono	Nono	Nono	Mono	Nono	Nono	Nono	Nono	
Aut Ent (S) 20.7 20.7 20.7 20.2 23.2 10.0 16.0 16.0 16.0 Autated g/C Ratio 0.68 0.60 0.01 0.05 0.32 0.33 0.33 0.33	Act Effet Croop (a)	20.7	20 7	25.2	25.2	10.0	10.0	10.0	10.0	
Audie gie Ratio 0.52 0.52 0.43 0.52 0.52 0.52 0.52 0.52 Ver Ratio 0.68 0.60 0.01 0.05 0.36 0.45 0.19 0.46 Control Delay 16.4 11.4 7.3 5.9 21.4 19.1 18.5 19.2 Queue Delay 10.6 0.36 0.45 0.19 0.46 Control Delay 10.6 11.4 7.3 5.9 21.4 19.1 18.5 19.2 LOS B B A A C B B A Approach LOS B A A C B B A Queue Length S0th (m) 29.0 26.6 0.1 1.2 8.1 18.2 3.9 18.7 Queue Length S0th (m) 78.0 70.8 14.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 0.0 0.0 0.0 0.0 0 0.0 0 0.0 0.0 <td>Actuated a/C Patia</td> <td>20.7</td> <td>20.7</td> <td>25.2</td> <td>25.2</td> <td>0.22</td> <td>0.22</td> <td>0.20</td> <td>10.0</td> <td></td>	Actuated a/C Patia	20.7	20.7	25.2	25.2	0.22	0.22	0.20	10.0	
Wit Nation 0.00	Actualed g/C Ratio	0.52	0.52	0.45	0.45	0.32	0.32	0.32	0.52	
Control Delay 10-4 11.4 7.3 5.9 21.4 10-1 10-5 19-2 Course Delay 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Total Delay 16.4 11.4 7.3 5.9 21.4 19.1 18.5 19.2 LOS B B A A C B B B Approach Delay 13.8 6.0 19.8 19.1 Approach LOS B A B B B Queue Length 50th (m) 29.0 26.6 0.1 1.2 8.1 18.2 3.9 18.7 Queue Length 50th (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 214.4 Tum Bay Length (m) 45.0 70.0 40.0 40.0 888 205.2 214.4 214.4 Starvation Cap Reductin 0 0 0 0 0 0 0 0	V/C Rallo	16.4	0.00	0.01	0.05	0.50	10.40	10 5	10.2	
Dubber Delay 0.0		10.4	0.0	7.3	0.0	21.4	19.1	10.0	19.2	
Ubla Delay 10.4 11.4 1.7.3 3.3 21.4 19.1 10.3 19.2 LOS B B A A C B B B Approach Delay 13.8 6.0 19.8 19.1 Approach LOS B A B B B Queue Length 50th (m) 29.0 26.6 0.1 12.8.1 18.2 3.9 18.7 Queue Length 50th (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 214.4 Tum Bay Length (m) 45.0 70.0 40.0 88e 20.4 20.8.2 214.4 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Starvation Cap Reductn 0 <td>Queue Delay</td> <td>16.4</td> <td>11.4</td> <td>0.0</td> <td>0.0</td> <td>21.4</td> <td>10.1</td> <td>0.0 10 E</td> <td>10.0</td> <td></td>	Queue Delay	16.4	11.4	0.0	0.0	21.4	10.1	0.0 10 E	10.0	
LCUS D D A A C D D D Approach LOS B A B B Queue Length 50th (m) 29.0 26.6 0.1 1.2 8.1 18.2 3.9 18.7 Queue Length 50th (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 1213 1542 605 1604 74.0 1337 737 1346 Starvation Cap Reductn 0 20 20 <		10.4 D	11.4 D	7.5	J.9 A	21.4	19.1 D	10.J	19.Z	
https://doi.org/10.00 10.00 10.00 10.00 10.00 10.00 Approach LOS B A B B Queue Length 50th (m) 29.0 26.6 0.1 1.2 8.1 18.2 3.9 18.7 Queue Length 95th (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 10.0 10.0 Base Capacity (vph) 1213 1542 605 1604 740 1337 737 1346 Starvation Cap Reductn 0 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 0 Storage Cap Reductn 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 18.4 Atuated Cycle Cole 14.4<	Approach Dolay	D	12.8	A	A 6.0	U	10.8	D	D 10.1	
Application B A B B B Queue Length 50th (m) 29.0 26.6 0.1 1.2 8.1 18.2 3.9 18.7 Queue Length 95th (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 1213 1542 605 1604 740 1337 737 1346 Starvation Cap Reductn 0 <td>Approach LOS</td> <td></td> <td>13.0 D</td> <td></td> <td>0.0</td> <td></td> <td>19.0 D</td> <td></td> <td>19.1 D</td> <td></td>	Approach LOS		13.0 D		0.0		19.0 D		19.1 D	
Cueue Length Softi (m) 78.0 70.8 1.4 6.0 27.8 51.8 15.6 53.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 1213 1542 605 1604 740 1337 737 1346 Starvation Cap Reductn 0	Oueue Length 50th (m)	20.0	26.6	0.1	12	8.1	18.2	30	18.7	
Calculate Length Solution (III) 17.0 <td>Queue Length 95th (m)</td> <td>29.0</td> <td>20.0</td> <td>1.1</td> <td>6.0</td> <td>27.8</td> <td>51.8</td> <td>15.6</td> <td>53.0</td> <td></td>	Queue Length 95th (m)	29.0	20.0	1.1	6.0	27.8	51.8	15.6	53.0	
International Link Disk (inf) 02.0 109.0 219.2 214.4 Tum Bay Length (m) 45.0 70.0 40.0 Base Capacity (vph) 1213 1542 605 1604 740 1337 737 1346 Starvation Cap Reductn 0 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.15 0.19 0.08 0.19 Intersection Summary Intersection Summary Valuetal Cycle: 60 Valuetal Cycle: 60 Valuetal Cycle: 60 Valuetal Cycle: 60 Valuetal Cycle of Service C Analysis Period (min) 15 Intersection LOS: B Intersection LOS: B Valuetal Cycle of Service C Valuetal Cycle of Serv	Internal Link Diet (m)	70.0	0.0	1.4	160.9	27.0	205.2	15.0	214.4	
Ham Day Lengur (H) 43.0 70.0 40.0 Base Capacity (vph) 1213 1542 605 1604 740 1337 737 1346 Starvation Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.15 0.19 0.08 0.19 Intersection Summary	Turn Pay Longth (m)		02.0	45.0	109.0	70.0	200.2	40.0	Z 14.4	
Date Capacity (vpr) 1213 1342 003 1044 1357 1340 Starvation Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.15 0.19 0.08 0.19 Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection LOS: B Intersection LOS: B Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road 46 20	Pase Canacity (uph)	1012	15/12	40.0	160/	70.0	1337	40.0	13/6	
Spillback Cap Reductin 0 0 0 0 0 0 0 Spillback Cap Reductin 0 0 0 0 0 0 0 Storage Cap Reductin 0 0 0 0 0 0 0 Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.15 0.19 0.08 0.19 Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection LOS: B Intersection LOS: B Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road 46.2 m	Starvation Can Reductn	1213	1342	005	1004	0	1337	131	1340	
Spinlack Cap Reductin 0	Spillback Cap Reducts	0	0	0	0	0	0	0	0	
Storage cap Reduction 0<	Storage Cap Reductin	0	0	0	0	0	0	0	0	
Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road	Reduced v/c Ratio	0 37	0.34	0.00	0 02	0 15	0 10	0 08	0 10	
Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road		0.57	0.04	0.00	0.02	0.15	0.13	0.00	0.13	
Cycle Length: 112.4 Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road	Intersection Summary									
Actuated Cycle Length: 55.4 Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road Splits and Phases: 3: Legget Drive & Solandt Road 65.2 m	Cycle Length: 112.4									
Natural Cycle: 60 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road Splits and Phases: 3: Legget Drive & Solandt Road 65.2 m	Actuated Cycle Length: 55.4									
Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road Splits and Phases: 3: Legget Drive & Solandt Road 65.2 m 46.2 m	Natural Cycle: 60									
Maximum v/c Ratio: 0.68 Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road Splits and Phases: 3: Legget Drive & Solandt Road 46.2 a	Control Type: Semi Act-Uncoord									
Intersection Signal Delay: 15.8 Intersection LOS: B Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road	Maximum v/c Ratio: 0.68									
Intersection Capacity Utilization 64.7% ICU Level of Service C Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road	Intersection Signal Delay: 15.8	,			In	tersection L	OS: B			
Analysis Period (min) 15 Splits and Phases: 3: Legget Drive & Solandt Road	Intersection Capacity Utilization 64.79	6			IC	U Level of S	Service C			
Splits and Phases: 3: Legget Drive & Solandt Road	Analysis Period (min) 15									
	Splits and Phases: 3: Legget Drive	& Solandt	Road							
46.2 c	402							04		
	66.2 0						10	2.0		

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Solandt TIA Future Total 2021 AM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		aî.	1	3	**	1	55	**	1
Traffic Volume (vph)	63	26	9	37	12	193	88	2189	84	318	1295	123
Future Volume (vph)	63	26	9	37	12	193	88	2189	84	318	1295	123
Lane Group Flow (vph)	0	93	9	0	52	203	93	2304	88	335	1363	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.6	19.6		19.6	19.6	14.9	78.7	78.7	19.8	83.5	83.5
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.11	0.61	0.61	0.15	0.64	0.64
v/c Ratio		0.47	0.03		0.27	0.52	0.48	1.14	0.10	0.68	0.63	0.14
Control Delay		55.8	0.2		49.0	10.1	61.9	93.9	3.6	74.7	12.9	2.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l otal Delay		55.8	0.2		49.0	10.1	61.9	93.9	3.6	/4./	12.9	2.9
LOS		E	A		D	В	E	H AD C	А	E	В	A
Approach Delay		50.9			18.1			89.6			23.5	
Approach LOS		D 00 0	0.0		42 O	0.0	02.0	۲ محمد	0.0	44.0	100.0	0.0
Queue Length 50th (m)		23.9	0.0		13.0	0.0	23.8	~3/4./	0.2	44.3	109.2	0.0
Queue Length 95th (m)		30.3	0.0		22.0	18.9	40.9	#4/8.4	9.2	m26.4	m158.1	m10.6
Turn Day Longth (m)		120.0	20.0		308.Z	50.0	05.0	130.8	70.0	100.0	353.3	25.0
Page Canadity (unb)		260	30.0		260	50.0	95.0	2020	70.0	190.0	0154	25.0
Starvation Can Poductn		300	409		300	004	233	2020	901	501	2104	952
Stal valion Cap Reductin		0	0		0	0	0	0	0	0	0	0
Storage Can Reductin		0	0		0	0	0	0	0	0	0	0
Poducod v/o Patio		0.25	0 02		0 1/	0 37	0.40	1 1 /	0 10	0.67	063	0 14
		0.25	0.02		0.14	0.57	0.40	1.14	0.10	0.07	0.00	0.14
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 68 (52%), Referenced to pha	ase 2:NBT ar	nd 6:SBT, S	tart of Gree	n								
Natural Cycle: 145												
Control Type: Actuated-Coordinated	1											
Maximum v/c Ratio: 1.14												
Intersection Signal Delay: 59.0	0.01			In	tersection L	OS: E						
Intersection Capacity Utilization 100	.0%			IC	U Level of S	Service G						
Analysis Period (min) 15		- 11 - 12 - 11										
 Volume exceeds capacity, queue 	e is theoretic	ally infinite.										
Queue snown is maximum after t	wo cycles.		laac to									
# 95th percentile volume exceeds	capacity, qu	eue may be	ionger.									
Queue snown is maximum after t	wo cycles.	16. 1										
m volume for 95th percentile queu	le is metered	a by upstrea	m signal.									
Splits and Phases: 4: March Road	1 & Carlino ∆	venue										
												20-
								1				

 Ø1
 Ø2 (R)

 68 s
 40 s

 Ø5
 Ø6 (R)

 68 s
 40 s

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Lane Group	EBT	EBR	WBT
Lane Configurations		1	***
Traffic Volume (vph)	1020	65	222
Future Volume (vph)	1020	65	222
Lane Group Flow (vph)	1074	68	234
Sign Control	Free		Free
Intersection Summary			
Control Type, Unsignalized			

Control Type: Unsignalized Intersection Capacity Utilization 60.0% Analysis Period (min) 15

ICU Level of Service B

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Solandt TIA Future Total 2021 AM 6: East Access & Solandt Road

	-	7	1	-	1	1
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	A1.			٠	M	
Traffic Volume (veh/h)	1007	13	8	222	12	3
Future Volume (Veh/h)	1007	13	8	222	12	3
Sian Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1060	14	8	234	13	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	129			106		
pX, platoon unblocked					0.99	
vC. conflicting volume			1074		1317	537
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1074		1315	537
tC, single (s)			4.1		6.8	6.9
tC. 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		91	99
cM capacity (veh/h)			645		146	488
Direction Lane #	FR 1	FB 2	WB 1	NR 1		
Volume Total	707	367	2/2	16		
Volume Left	101	0	272	13		
Volume Right	0	1/	0	3		
oSH	1700	1700	645	168		
Volume to Canacity	0.42	0.22	043	0.10		
Oueue Length 95th (m)	0.42	0.22	0.01	2.5		
Control Delay (s)	0.0	0.0	0.5	2.5		
Lane LOS	0.0	0.0	0.5	20.0 D		
Approach Delay (s)	0.0		0.5	28.6		
Approach LOS	0.0		0.0	20.0 D		
				U		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			39.8%	IC	U Level of S	ervice
Analysis Period (min)			15			

Solandt TIA Future Total 2021 PM 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	ሻሻ	**	1	33	***	1	1	***	1
Traffic Volume (vph)	270	155	414	204	393	363	334	1569	107	75	659	125
Future Volume (vph)	270	155	414	204	393	363	334	1569	107	75	659	125
Lane Group Flow (vph)	284	163	436	215	414	382	352	1652	113	79	694	132
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	-		2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase							-					-
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	19.0	42.0	42.0	19.0	42.0	42.0	21.0	38.0	38.0	21.0	38.0	38.0
Total Split (%)	15.8%	35.0%	35.0%	15.8%	35.0%	35.0%	17.5%	31.7%	31.7%	17.5%	31.7%	31.7%
Yellow Time (s)	3.7	37	37	37	37	37	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	33	33	3.1	33	33		4.0 2.1	4.0 2.1	23	2.0	2.1
Lost Timo Adjust (s)	2.0	3.0	3.0	2.1	3.0	3.0	2.5	2.1	2.1	2.0	2.1	2.1
Total Lost Time (a)	-2.0	-3.0	-3.0	-2.0	-3.0	-3.0	-2.9	-2.1	-2.1	-2.9	-2.1	-2.1
	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead Lag Optimize?	Leau	Lay	Lay	Leau	Lay	Lay	Leau	Lay	Lay	Leau	Lay	Lay
Lead-Lag Optimize?	res	Nere	Nere	Nere	Nene	Nene	Nere	C Mey	C Mex	Nene	C Mex	C Mey
	None	None	None	None	None	None	None		C-IVIAX	None	C-IVIAX	C-IVIAX
Act Effect Green (s)	14.8	31.1	31.1	14.4	30.6	30.6	17.4	47.0	47.0	13.6	41.2	41.2
Actuated g/C Ratio	0.12	0.26	0.26	0.12	0.26	0.26	0.14	0.40	0.40	0.11	0.34	0.34
v/c Ratio	0.71	0.19	0.72	0.55	0.48	0.67	0.75	0.86	0.17	0.42	0.42	0.22
Control Delay	60.9	33.4	18.1	55.5	38.8	16.0	58.5	25.4	1.6	55.4	32.9	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	33.4	18.1	55.5	38.8	16.0	58.5	25.4	1.6	55.4	32.9	3.6
LOS	E	С	В	E	D	В	E	С	A	E	С	A
Approach Delay		34.7			33.7			29.6			30.6	
Approach LOS		С			С			С			С	
Queue Length 50th (m)	35.2	15.2	24.9	26.1	42.0	19.0	40.8	~175.5	1.0	18.4	52.7	0.0
Queue Length 95th (m)	50.5	24.0	63.3	39.1	56.8	52.6	m42.7	m#193.8	m2.8	33.7	66.1	9.4
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	406	1061	667	406	1061	644	473	1910	668	237	1652	599
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.15	0.65	0.53	0.39	0.59	0.74	0.86	0.17	0.33	0.42	0.22
Intersection Summary												
Cuele Length: 100												
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 72 (60%), Referenced to pha	ase 2:NBT ar	10 6:SBT, S	tart of Gree	n								
Natural Cycle: 110												
Control Type: Actuated-Coordinated	d											
Maximum v/c Ratio: 0.86						~~ ~						
Intersection Signal Delay: 31.6				Int	tersection L	OS: C						
Intersection Capacity Utilization 80.	5%			IC	U Level of S	Service D						
Analysis Period (min) 15												
 Volume exceeds capacity, queu 	ie is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	s capacity, qu	eue may be	longer.									
Queue shown is maximum after	two cycles.											
m Volume for 95th percentile que	ue is metered	d by upstrea	ım signal.									
Splits and Phases: 1 March Roa	d & Terry Fo	x Drive										
	▲						2					25

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Solandt TIA Future Total 2021 PM 2: March Road & Solandt Road

2: March Road & Soland	dt Road											PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	3	*	1	ሻሻ	î.	5	**	1	5	**	1	
Traffic Volume (vph)	87	43	651	733	75	121	1780	90	46	1000	68	
Future Volume (vph)	87	43	651	733	75	121	1780	90	46	1000	68	
Lane Group Flow (vph)	92	45	685	772	320	127	1874	95	48	1053	72	
Turn Type	Prot	NA	Free	Prot	NA	pm+pt	NA	Perm	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2			6		
Permitted Phases			Free			2		2	6		6	
Detector Phase	7	4		3	8	5	2	2	6	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	10.9	31.5		10.9	31.5	11.3	26.3	26.3	26.3	26.3	26.3	
Total Split (s)	29.0	32.0		29.0	32.0	12.0	59.0	59.0	47.0	47.0	47.0	
Total Split (%)	24.2%	26.7%		24.2%	26.7%	10.0%	49.2%	49.2%	39.2%	39.2%	39.2%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	46	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-19	-2.5		-19	-2.5	-2.3	-2.3	-23	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
	0.F	0. P		0.P	0.+ Lan	0.P	4.0	4.0	0. P	1.0 Lag	0. P	
Lead-Lag Ontimize?	Voc	Vac		Voc	Voc	Vac			Vas	Voc	Vac	
Recall Mode	None	None		None	None	None	C_Max	C-Max	C-Max	C-Max	C-Max	
Act Effet Groop (c)	12.8	16.0	120.0	25.3	25.1	60.1	60 1	60 1	53.8	53 g	53.8	
Actuated a/C Batia	0.10	0.14	120.0	20.0	23.1	05.1	05.1	05.1	0.45	0.45	0.45	
No Patio	0.12	0.14	0.46	1 13	0.21	0.00	0.00	0.00	0.45	0.45	0.43	
V/C RdIIU	0.40	0.10	0.40	1.13	20.5	10 /	0.97	0.11	0.00	0.70	0.10	
	57.2	44.0	1.0	0.0	39.5	10.4	23.2	0.5	99.1	20.7	4.2	
	57.0	44.6	1.0	117.0	20.5	10.0	0.0	0.0	0.0	0.0	0.0	
	57.Z	44.0 D	1.0	117.9 E	39.0	10.4 D	23.2	0.5	99.1 E	20.7	4.2	
LUS Annraach Dalau	E	0.7	А	F	04.0	В	01.0	А	F	C	А	
Approach Delay		9.7			94.9		21.0			20.3		
Approach LOS	04.7	A 10.2	0.0	115 0	۲ 40 г	10	402.7	0.0	44.0	101.1	07	
Queue Length 50th (m)	21.7	10.3	0.0	~115.2	48.5	4.3	123.7	0.2	11.3	104.4	2.1	
Queue Length 95th (m)	37.0	19.3	0.0	#154.5	/5.5	m10.1	#345.9	m0.0	m#34.3	#163.5	m8.3	
Internal Link Dist (m)		90.1	<u> </u>		43.7	400.0	219.9		450.0	189.4	70.0	
Turn Bay Length (m)	0.40		60.0	000	10.1	160.0	4000	005	150.0	4500	70.0	
Base Capacity (vph)	349	411	14//	686	464	265	1929	885	60	1502	/28	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.26	0.11	0.46	1.13	0.69	0.48	0.97	0.11	0.80	0.70	0.10	
Intersection Summary												
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 21 (18%), Referenced to pha	se 2:NBTL a	nd 6:SBTL,	Start of G	reen								
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.13												
Intersection Signal Delay: 36.8				Int	ersection L	OS: D						
Intersection Capacity Utilization 115.	.3%			IC	U Level of S	Service H						
Analysis Period (min) 15												
~ Volume exceeds capacity, queue	e is theoretic	ally infinite.										
Queue shown is maximum after t	wo cycles.	·										
# 95th percentile volume exceeds	capacity, que	eue may be	longer.									
Queue shown is maximum after t	wo cvcles.	,	Ŭ									
m Volume for 95th percentile queu	ie is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Road	& Solandt F	Road										25
No. and -					1			1				

1 Ø2 (R) 🕊	6 03	→ _{Ø4}
59 s	29 s	32 s
▲ Ø5 🖡 🖗 Ø6 (R)	▶ _{Ø7}	4 — Ø8
12 s 47 s	29 s	32 s

Solandt TIA Future Total 2021 PM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	5	1.	5	1.	5	1.	3	1.	
Traffic Volume (vph)	60	32	51	260	291	108	7	251	
Future Volume (vph)	60	32	51	260	291	108	7	251	
Lane Group Flow (vph)	63	103	54	306	306	118	7	735	
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	
Protected Phases		2		6	3	8		4	
Permitted Phases	2		6		8		4		
Detector Phase	2	2	6	6	3	8	4	4	
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	
Minimum Split (s)	25.2	25.2	25.2	25.2	11.2	25.2	25.2	25.2	
Total Split (s)	41.2	41.2	41.2	41.2	31.2	77.4	46.2	46.2	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	26.3%	65.3%	39.0%	39.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag					Lead		Lag	Lag	
Lead-Lag Optimize?					Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	
Act Effct Green (s)	24.9	24.9	24.9	24.9	67.9	67.9	42.7	42.7	
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.67	0.67	0.42	0.42	
v/c Ratio	0.48	0.24	0.19	0.71	0.73	0.10	0.01	1.03	
Control Delay	45.8	13.7	31.9	44.1	33.9	7.0	22.3	70.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	45.8	13.7	31.9	44.1	33.9	7.0	22.3	70.5	
LOS	D	В	С	D	С	А	С	E	
Approach Delay		25.9		42.3		26.4		70.0	
Approach LOS		С		D		С		E	
Queue Length 50th (m)	10.9	5.3	8.7	55.9	41.7	7.4	0.8	~150.6	
Queue Length 95th (m)	26.4	19.3	20.1	91.4	83.5	18.2	4.4	#277.6	
Internal Link Dist (m)		82.0		169.8		205.2		214.4	
Turn Bay Length (m)			45.0		70.0		40.0		
Base Capacity (vph)	201	620	436	649	517	1290	490	712	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.31	0.17	0.12	0.47	0.59	0.09	0.01	1.03	
Intersection Summary									
Cycle Length: 118.6									
Actuated Cycle Length: 100.9									
Natural Cycle: 90									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 1.03									
Intersection Signal Delay: 48.9				In	tersection L	OS: D			
Intersection Capacity Utilization 98.19	%			IC	U Level of S	Service F			
Analysis Period (min) 15									
~ Volume exceeds capacity, queue	is theoretic	ally infinite.							
Queue shown is maximum after tw	vo cycles.								
# 95th percentile volume exceeds of	apacity, qu	eue may be	longer.						
Queue shown is maximum after tw	vo cycles.								
Splits and Phases: 3. Legget Drive	& Solandt	Road							
A Contraction of Logget Dive	a colund		•				~		
-•Ø2			1Ø3				♥ Ø4		
41.2 s			31.2 s				46.2 s		
Ø6			Tø8						

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Solandt TIA Future Total 2021 PM 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		្ឋ	1		្ឋ	1	3	**	1	ሻሻ	**	1
Traffic Volume (vph)	26	13	30	121	19	322	33	1617	35	302	2113	50
Future Volume (vph)	26	13	30	121	19	322	33	1617	35	302	2113	50
Lane Group Flow (vph)	0	41	32	0	147	339	35	1702	37	318	2224	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	62.0	62.0	18.0	62.0	62.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	15.0%	51.7%	51.7%	15.0%	51.7%	51.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		22.9	22.9		23.2	23.2	10.7	66.7	66.7	18.2	79.3	79.3
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.09	0.56	0.56	0.15	0.66	0.66
v/c Ratio		0.16	0.09		0.60	0.77	0.23	0.91	0.04	0.65	1.00	0.05
Control Delay		38.0	0.5		52.6	30.7	53.9	34.4	0.1	50.7	44.9	2.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		38.0	0.5		52.6	30.7	53.9	34.4	0.1	50.7	44.9	2.3
LOS		D	A		D	С	D	С	А	D	D	A
Approach Delay		21.6			37.3			34.1			44.8	
Approach LOS		С			D			С			D	
Queue Length 50th (m)		8.7	0.0		34.1	35.9	8.2	193.7	0.0	38.9	~324.7	0.0
Queue Length 95th (m)		16.6	0.0		49.0	62.8	18.5	#286.8	0.0	m48.5	m#400.7	m1.4
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		411	507		383	576	195	1863	858	492	2214	989
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.38	0.59	0.18	0.91	0.04	0.65	1.00	0.05
Intersection Summary												
Cycle Length: 120												
Actuated Cycle Length: 120												
Offset: 96 (80%), Referenced to pha	se 2:NBT ar	nd 6:SBT, S	tart of Gree	n								
Natural Cycle: 145												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.00												
Intersection Signal Delay: 39.8				In	tersection L	OS: D						
Intersection Capacity Utilization 91.4	%			IC	U Level of S	Service F						
Analysis Period (min) 15												
 Volume exceeds capacity, queue 	e is theoretic	ally infinite.										
Queue shown is maximum after t	wo cycles.											
# 95th percentile volume exceeds	capacity, qu	eue may be	e longer.									
Queue shown is maximum after to m Volume for 95th percentile queu	WO CYCles.	hy unstres	m signal									
in volume for 95th percentile queu		a by upsued	un siynai.									
Splits and Phases: 4: March Road	I & Carling A	venue										
	(R)							404				


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Lane Group	EBT	EBR	WBT
Lane Configurations	*	1	***
Traffic Volume (vph)	168	11	973
Future Volume (vph)	168	11	973
Lane Group Flow (vph)	177	12	1024
Sign Control	Free		Free
Intersection Summary			
Control Type: Unsignalized			

Intersection Capacity Utilization 23.2% Analysis Period (min) 15

ICU Level of Service A

Solandt TIA Future Total 2021 PM 6: East Access & Solandt Road

	-	7	*	←	1	1
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	A 12			4	M	
Traffic Volume (veh/h)	166	2	2	973	64	16
Future Volume (Veh/h)	166	2	2	973	64	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	175	2	2	1024	67	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	129			106		
pX, platoon unblocked					0.79	
vC. conflicting volume			177		1204	88
vC1. stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			177		1124	88
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		57	98
cM capacity (veh/h)			1396		157	952
		== ^				
Direction, Lane #	EB 1	EB 2	WB 1	NB 1		
Volume Total	117	60	1026	84		
Volume Left	0	0	2	67		
Volume Right	0	2	0	17		
cSH	1700	1700	1396	188		
Volume to Capacity	0.07	0.04	0.00	0.45		
Queue Length 95th (m)	0.0	0.0	0.0	16.6		
Control Delay (s)	0.0	0.0	0.0	38.6		
Lane LOS			A	E		
Approach Delay (s)	0.0		0.0	38.6		
Approach LOS				E		
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			67.2%	IC	U Level of S	ervice
Analysis Period (min)			15			

Solandt TIA Future Total 2021 AM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	e										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	**	**	1	**	***	1	**	**	1
Traffic Volume (vph)	105	541	289	70	138	56	282	532	169	373	1312	178
Future Volume (vph)	105	541	289	70	138	56	282	532	169	373	1312	178
Lane Group Flow (vph)	111	569	304	74	145	59	297	560	178	393	1381	187
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.5	32.5	32.5	10.8	29.3	29.3	19.1	52.1	52.1	21.2	54.1	54.1
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.40	0.40	0.16	0.42	0.42
v/c Ratio	0.39	0.68	0.52	0.27	0.19	0.13	0.62	0.29	0.26	0.74	0.99	0.27
Control Delay	59.9	48.0	7.2	58.1	39.1	0.6	51.4	36.8	18.1	61.2	60.3	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	48.0	7.2	58.1	39.1	0.6	51.4	36.8	18.1	61.2	60.3	9.0
LOS	E	D	A	E	D	A	D	D	В	E	E	A
Approach Delay		36.7			36.0			37.8			55.6	
Approach LOS	447	D	0.0	0.7	D 40.0	0.0	40.7	D	0.0	54.0	E O10 O	<u> </u>
Queue Length 50th (m)	14.7	/4.5	0.0	9.7	16.6	0.0	42.7	32.4	8.0	51.3	~210.2	0.3
Queue Length 95th (m)	24.7	0.00	22.1	17.7	24.1	0.0	0.00	04.0	40.1	/ I.Z	#200.5	25.0
Turn Day Longth (m)	105.0	141.Z	60.0	60.0	123.0	75.0	160.0	179.2	0E 0	105.0	2/5.4	100.0
Turri Bay Length (III)	105.0	000	624	200	000	10.0	100.0	1000	0.00	105.0	1206	100.0
Starvetion Con Deducto	300	900	034	300	900	552	525	1929	000	041	1390	004
Starvation Cap Reducts	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0 37	0 58	0.48	0.25	0 15	0 11	0.57	0.29	0.26	0.73	0 99	0.27
	0.01	0.00	0.40	0.20	0.15	0.11	0.01	0.25	0.20	0.75	0.55	0.21
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 114 (88%), Referenced to p	hase 2:NBT a	and 6:SBT,	Start of Gre	en								
Natural Cycle: 120												
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 0.99						00 B						
Intersection Signal Delay: 45.6	40/			In	tersection L	OS: D						
Intersection Capacity Utilization 88.	4%			IC	U Level of S	Service E						
Analysis Period (min) 15		alles to Contr										
~ volume exceeds capacity, queu	ie is theoretic	ally infinite.										
Queue snown is maximum after	two cycles.											
# Soth percentile volume exceeds	s capacity, qu	eue may be	e ionger.									
Queue snown is maximum after	two cycles.											
Splits and Phases: 1: March Roa	d & Terry Fo	x Drive										

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Ø1	Ø2 (R)	Ø3	₩ Ø4
25 s	47 s	16 s	42 s
↑ø5	Ø6 (R)	▶ Ø7	4 [▲] Ø8
25 s	47 s	16 s	42 s

Solandt TIA Future Total 2021 AM (improved) 2: March Road & Solandt Road

2: March Road & Solandt	Road		·									AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	×.	*	1	15	1.	55	***	1	17	***	1	
Traffic Volume (vph)	29	110	129	74	121	607	898	808	167	1434	133	
Future Volume (vph)	29	110	129	74	121	607	898	808	167	1434	133	
Lane Group Flow (vph)	31	116	136	78	168	639	945	851	176	1509	140	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			Free					2			6	
Detector Phase	7	4		3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	10.9	38.5		10.9	38.5	11.3	26.3	26.3	14.0	26.3	26.3	
Total Split (s)	10.9	38.5		10.9	38.5	32.0	66.6	66.6	14.0	48.6	48.6	
Total Split (%)	8.4%	29.6%		8.4%	29.6%	24.6%	51.2%	51.2%	10.8%	37.4%	37.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	46	4.6	4.6	4.6	46	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-23	-23	-23	0.0	-23	-23	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	6.3	4.0	4.0	
Lead/Lag	Lead	l ag		Lead	l aq	l ead	l aq	L ag	Lead	l aq	l ag	
Lead-Lag Ontimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effet Green (s)	69	20.9	130.0	6.9	23.1	31 4	74 A	74 A	11 7	57 0	57 0	
Actuated a/C Patio	0.5	0.16	1.00	0.5	0.18	0.24	0.57	0.57	0.00	0.4.4	0.44	
V/c Ratio	0.05	0.10	0.00	0.05	0.10	0.24	0.37	0.37	0.09	0.44	0.44	
Control Dolov	70.9	51.3	0.03	68.5	50.5	51.7	23.5	23.0	52.0	35.0	0.13	
	0.0	0.0	0.1	00.5	0.0	0.0	23.5	23.0	0.0	0.0	0.0	
Total Dolay	70.8	51.3	0.0	68.5	50.5	51.7	23.5	23.0	52.0	35.0	0.0	
	70.0 E	J1.J	0.1	00.J	JU.J	J1.7	20.0	23.0	J2.9	JJ.0	0.5	
Approach Delay	L	28.8	~	L	56.2	D	30.7	U	U	34.7	A	
Approach LOS		20.0			50.2		00.7			04.1		
Oueue Length 50th (m)	8.2	28.7	0.0	10.7	30.0	03.0	52.8	83.8	25.6	8/ 9	17	
Queue Length 95th (m)	10.2	/1.9	0.0	10.7	55.0	#125.4	96.0	#175.7	20.0 m#30.3	m104.3	4.7 m0.5	
Internal Link Dist (m)	19.5	41.0	0.0	19.4	13.5	#125.4	210.0	#113.1	11#30.3	180 /	1119.5	
Turn Bay Length (m)		90.1	60.0		43.7	160.0	219.9		150.0	109.4	70.0	
Pase Capacity (uph)	88	168	1/78	170	157	786	2756	1076	203	2112	70.0	
Starvation Can Poductn	00	400	1470	0	437	100	2130	1070	293	2113	0	
Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Starage Can Reductr	0	0	0	0	0	0	0	0	0	0	0	
Poducod v/o Patio	0.35	0.25	0.00	0.45	0.37	0.81	0.34	0 70	0 60	0.71	0 10	
Reduced WC Rallo	0.55	0.25	0.09	0.45	0.57	0.01	0.34	0.19	0.00	0.71	0.19	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2	NBT and 8	6:SBT, Starl	of Green									
Natural Cycle: 120												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.82												
Intersection Signal Delay: 33.4				Int	ersection L	OS: C						
Intersection Capacity Utilization 82.4%	, D			ICI	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds ca	apacity, que	eue may be	longer.									
Queue shown is maximum after two	o cycles.	·	Ţ									
m Volume for 95th percentile queue	is metered	by upstream	m signal.									
Splits and Phases: 2: March Road &	& Solandt F	Road										
Ø1 Ø2 (R)							f Ø:	3 -	Ø4			20
14 s 66.6 s							10.9 s	38.5	s			

Ø1	Ø2 (R) 💗	🕈 Ø3	— Ø4	
14 s	66.6 s	10.9 s	38.5 s	
105	📕 🖡 Ø6 (R)		← Ø8	
32 s	48.6 s	10.9 s	38.5 s	

Solandt TIA Future Total 2021 AM (improved) 3: Legget Drive & Solandt Road

Lane Croup EBL EBI WBL WBT NBL NBT SBL SBT SBR Lane Configurations 1<	3: Legget Drive & Solar	ndt Road		,							AM.syn
Lane Group EBL EBT WBL WBT NBL NBT SBL SBT SBR Lane Group Fouring (vph) 430 257 3 28 103 183 53 188 57 Future Volume (vph) 430 257 3 28 103 183 53 188 57 Lane Group Flow (vph) 433 524 3 38 108 252 56 198 60 Turn Type Perm NA Perm< NA Perm NA Perm Perm Perm Perm NA Perm Perm Perm Perm NA Perm Perm Perm Perm Perm NA Perm		٠	+	4	Ŧ	1	Ť	1	Ŧ	~	
Lane Configurations 1	Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Traffic Volume (vph) 430 257 3 28 103 183 53 188 57 Lane Group Flow (vph) 453 524 3 38 108 252 56 198 60 Tum Type Perm NA Perm Perm Paradition	Lane Configurations	5	t.	×	t.	×	t.	×	*	1	
Future Volume (vph) 430 257 3 28 103 183 53 188 57 Lane Group Flow (vph) 453 554 3 38 103 1253 56 198 60 Tum Type Perm NA Perm NA Perm NA Perm NA Perm Protected Phases 2 6 8 4 4 4 Detector Phase 2 2 6 8 4 4 Minimum Initial (s) 10.0	Traffic Volume (vph)	430	257	3	28	103	183	53	188	57	
Lane Group Flow (vph) 453 524 3 38 108 252 56 198 60 Tum Type Perm NA	Future Volume (vph)	430	257	3	28	103	183	53	188	57	
Tum Type Perm NA Perm NA Perm NA Perm Protected Phases 2 6 8 4 4 Permitted Phases 2 6 8 4 4 Detector Phase 2 2 6 8 4 4 Detector Phase 2 2 6 6 8 4 4 Winimum Sitel (6) 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 Total Split (5) 66.2 66.2 66.2 46.2 <t< td=""><td>Lane Group Flow (vph)</td><td>453</td><td>524</td><td>3</td><td>38</td><td>108</td><td>252</td><td>56</td><td>198</td><td>60</td><td></td></t<>	Lane Group Flow (vph)	453	524	3	38	108	252	56	198	60	
Protected Phases 2 6 8 4 4 Permitted Phases 2 6 8 4 4 Permitted Phases 2 2 6 8 8 4 4 4 Permitted Phases 2 2 6 6 8 8 4 4 4 Switch Phase 2 2 6 6 8 8 4 4 4 Switch Phase 2 2 6 6 8 8 4 4 4 Switch Phase 2 2 6 6 8 8 8 4 4 4 Switch Phase 3 10 10 10 10 10 10 10 10 10 10 10 10 10	Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Permite Phases 2 6 8 4 4 Detector Phase 2 2 6 6 8 8 4 4 Minimum Initial (s) 10.0	Protected Phases		2		6		8		4		
Detector Phase 2 2 6 6 8 8 4 4 4 Switch Phase 10.0	Permitted Phases	2		6		8		4		4	
Switch Phase Minimum Shitlai (s) 10.0 10.0 10.0 10.0 10.0 10.0 Minimum Shitlai (s) 33.2 33.2 33.2 29.2 29.2 29.2 29.2 29.2 Total Spit (s) 66.2 66.2 66.2 46.2	Detector Phase	2	2	6	6	8	8	4	4	4	
	Switch Phase										
Minimum Split (s) 33.2 33.2 33.2 33.2 33.2 29.2 29.2 29.2 29.2 29.2 Total Split (s) 66.2 66.2 66.2 66.2 46.2 46.2 46.2 46.2 46.2 Total Split (s) 58.9% 58.9% 58.9% 58.9% 41.1% 41.1% 41.1% 41.1% Yellow Time (s) 3.3	Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Total Split (s) 66.2 66.2 66.2 66.2 66.2 46.2	Minimum Split (s)	33.2	33.2	33.2	33.2	29.2	29.2	29.2	29.2	29.2	
Total Split (%) 58.9% 58.9% 58.9% 58.9% 58.9% 41.1% 41.1% 41.1% 41.1% 41.1% Vellow Time (s) 3.3	Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2	
Yellow Time (s) 3.3	Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%	
All-Red Time (s) 2.9 <th2.1< th=""> <th2.1< th=""> 2.1 <th2.1< th=""></th2.1<></th2.1<></th2.1<>	Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
Lost Time Adjust (s) -2.2 <td< td=""><td>All-Red Time (s)</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td>2.9</td><td></td></td<>	All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Total Lost Time (s) 4.0<	Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Lead/Lag Optimize? Recall Mode None None None None None None None Non	Total Lost Time (s)	4.0	4.0	4 0	4.0	4 0	4 0	4 0	4 0	4 0	
Lad-Lag Optimize? Recall Mode None	l ead/l ag	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Recail Mode None	Lead-Lag Optimize?										
Act Effic Green (s) 28.4 28.4 24.9 17.8	Recall Mode	None	None	None	None	None	None	None	None	None	
Actuated g/C Ratio 0.52 0.52 0.45 0.45 0.32 0	Act Effet Green (s)	28.4	28.4	24.9	24.9	17.8	17.8	17.8	17.8	17.8	
National of the state One One <thone< th=""> One <thone< th=""></thone<></thone<>	Actuated g/C Ratio	0.52	0.52	0 45	0 45	0.32	0.32	0.32	0.32	0.32	
Norication Orication	v/c Ratio	0.62	0.60	0.40	0.40	0.31	0.45	0.02	0.35	0.02	
Control Daty Tots Trial Trial Tots Tots <thtots< th=""> <thtots< th=""> Tots Tots<td>Control Delay</td><td>16.3</td><td>11.4</td><td>7.0</td><td>5.9</td><td>19.7</td><td>19.0</td><td>18.4</td><td>18.6</td><td>6.2</td><td></td></thtots<></thtots<>	Control Delay	16.3	11.4	7.0	5.9	19.7	19.0	18.4	18.6	6.2	
Cost of the set of the s	Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ites	Total Delay	16.3	11.4	7.0	5.9	19.7	19.0	18.4	18.6	6.2	
Loo 13.6 1.7 19.2 16.2 1.7 Approach Delay 13.6 6.0 19.2 16.2 1.7 Approach LOS B A B B 0.0 0.0 Queue Length 50th (m) 28.5 26.3 0.1 1.2 7.9 18.0 3.9 14.6 0.0 Queue Length 95th (m) 76.7 69.7 1.3 5.8 26.5 51.4 15.6 41.8 8.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 10.0 8.2 20.1 10.0 40.0		B	B	Α	0.0 A	B	B	B	B	A	
Approach LOS B A B B Queue Length 50th (m) 28.5 26.3 0.1 1.2 7.9 18.0 3.9 14.6 0.0 Queue Length 95th (m) 76.7 69.7 1.3 5.8 26.5 51.4 15.6 41.8 8.0 Internal Link Dist (m) 82.0 169.8 205.2 214.4 214.4 Turn Bay Length (m) 45.0 70.0 40.0 40.0 40.0 Base Capacity (vph) 1220 1545 606 1609 868 1348 745 1409 1182 Starvation Cap Reductn 0<	Approach Delay	b	13.6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	60	5	19.2	5	16.2	7.	
Approximation Constraint	Approach LOS		B		0.0 A		B		B		
Construction Construction <td< td=""><td>Queue Length 50th (m)</td><td>28.5</td><td>26.3</td><td>0.1</td><td>12</td><td>79</td><td>18.0</td><td>39</td><td>14 6</td><td>0.0</td><td></td></td<>	Queue Length 50th (m)	28.5	26.3	0.1	12	79	18.0	39	14 6	0.0	
Internal Link Dist (m) 82.0 169.8 205.2 214.4 Turn Bay Length (m) 45.0 70.0 40.0 40.0 Base Capacity (vph) 1220 1545 606 1609 868 1348 745 1409 1182 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0<	Queue Length 95th (m)	76.7	69.7	1.3	5.8	26.5	51.4	15.6	41.8	8.0	
International Link Dida (inf) 02.0 100.0 100.0 1210 1211 Turn Bay Length (m) 45.0 70.0 40.0 40.0 40.0 Base Capacity (vph) 1220 1545 606 1609 868 1348 745 1409 1182 Starvation Cap Reductn 0 0 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 0 0 Storage Cap Reductn 0	Internal Link Dist (m)	10.1	82.0	1.0	169.8	20.0	205.2	10.0	214.4	0.0	
Intersection Summary 1220 1545 606 1609 868 1348 745 1409 1182 Base Capacity (vph) 1220 1545 606 1609 868 1348 745 1409 1182 Starvation Cap Reductn 0 0 0 0 0 0 0 Spillback Cap Reductn 0 0 0 0 0 0 0 Storage Cap Reductn 0 0 0 0 0 0 0 Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.12 0.19 0.08 0.14 0.05 Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 54.8 Natural Cycle: 65 Value V	Turn Bay Length (m)		02.0	45.0	100.0	70.0	200.2	40.0	L 17.7	40.0	
Starvation Cap Reductn 0 <td>Base Capacity (vph)</td> <td>1220</td> <td>1545</td> <td>606</td> <td>1609</td> <td>868</td> <td>1348</td> <td>745</td> <td>1409</td> <td>1182</td> <td></td>	Base Capacity (vph)	1220	1545	606	1609	868	1348	745	1409	1182	
Spillback Cap Reductin 0	Starvation Can Reductn	0	0	000	0	000	0	0	0	0	
Spinals outprised of the second sec	Spillback Can Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio 0.37 0.34 0.00 0.02 0.12 0.19 0.08 0.14 0.05 Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 54.8 Natural Cycle: 65 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68	Storage Can Reductn	0	0	0	0	0	0	0	0	0	
Intersection Summary Cycle Length: 112.4 Actuated Cycle Length: 54.8 Natural Cycle: 65 Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.68	Reduced v/c Ratio	0.37	0.34	0.00	0.02	0.12	0.19	0.08	0.14	0.05	
Cycle Length: 112.4 Actuated Cycle Length: 54.8 Natural Cycle: 65 Control Type: Semi Act-Uncoord	Intersection Summary										
Actuated Cycle Length: 54.8 Natural Cycle: 65 Control Type: Semi Act-Uncoord	Cycle Length: 112 /										
Natural Cycle: 65 Control Type: Semi Act-Uncoord	Actuated Cycle Length: 5/ 8										
Control Type: Semi Act-Uncoord	Natural Cycle: 65										
	Control Type: Semi Act-Uncoord										
	Maximum v/c Ratio: 0.68										
Interpretion Signal Delay 15.1	Intersection Signal Delay: 15.1				In	torcoction L	ne p				
Intersection Signal Delay. 10.1	Intersection Capacity Litilization 65	Q0/					Convice C				
Analysis Period (min) 15	Analysis Period (min) 15	.0 70			IC						
Splits and Phases: 3: Legget Drive & Solandt Road	Splits and Phases: 3: Legget Dri	ve & Solandt	Road								
4 02	402						*	04			
66.2 s	66.2 s						46	25			

Ø2	▼ 04
66.2 s	46.2 s
▼ Ø6	Ø
66.2 s	46.2 s

Solandt TIA Future Total 2021 AM (improved) 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	е	-									AM.syn
	٠	→	7	1	+	*	1	Ť	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		aî.	1		aî.	1	3	***	1	55	**	1
Traffic Volume (vph)	63	26	9	37	12	193	88	2189	84	318	1295	123
Future Volume (vph)	63	26	9	37	12	193	88	2189	84	318	1295	123
Lane Group Flow (vph)	0	93	9	0	52	203	93	2304	88	335	1363	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	14.4	68.5	68.5	19.0	73.1	73.1
Total Split (%)	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	11.1%	52.7%	52.7%	14.6%	56.2%	56.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.2	20.2		20.2	20.2	13.6	77.9	77.9	19.9	84.2	84.2
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.10	0.60	0.60	0.15	0.65	0.65
V/C Ratio		0.45	0.03		0.25	0.61	0.53	0.80	0.10	0.67	0.63	0.13
Control Delay		54.3	0.2		47.7	27.1	66.6	24.1	3.6	61.0	14.0	3.7
		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.3	0.2		47.7	27.1	00.0 F	24.1	3.0	61.0	14.0	3.7
LUS Approach Dolou		10 F	А		21.2	U	E	25.0	А	E	21 0	A
Approach LOS		49.0 D			31.3			25.0			21.9	
Oueue Length 50th (m)		23.9	0.0		12 9	20.6	23.7	161.9	0.2	<i>4</i> 9 1	41.6	0.8
Queue Length 95th (m)		34.1	0.0		21.2	38.5	#51 0	#257.0	9.2	#76.0	83.3	m2 5
Internal Link Dist (m)		128.6	0.0		308.2	00.0	π01.0	130.8	5.2	#10.0	353.3	112.0
Turn Bay Length (m)		120.0	30.0		500.2	50.0	95.0	100.0	70.0	190.0	000.0	25.0
Base Capacity (vph)		394	496		389	522	175	2887	893	497	2171	959
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	000
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.24	0.02		0.13	0.39	0.53	0.80	0.10	0.67	0.63	0.13
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 125												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.80												
Intersection Signal Delay: 24.7				In	tersection L	OS: C						
Intersection Capacity Utilization 81.5	%			IC	U Level of S	Service D						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
Queue shown is maximum after the	wo cycles.											
m Volume for 95th percentile queu	e is metered	d by upstrea	ım signal.									
Splits and Phases: 4: March Road	& Carling A	venue										
	(n)							1				28
101 102	(K)							**Ø4				

Ø1	Tø2 (R)	1 04
19 s	68.5 s	42.5 s
05	↓ Ø6 (R)	
14.4 s	73.1s	42.5 s

-	7	-
EBT	EBR	WBT
**	1	***
1020	65	222
1020	65	222
1074	68	234
Free		Free
	EBT 1020 1020 1074 Free	EBT EBR ♠↑ ✔ 1020 65 1020 65 1020 65 1074 68 Free

Control Type: Unsignalized Intersection Capacity Utilization 33.1% Analysis Period (min) 15

ICU Level of Service A

AM.syn

	-	7	1	←	1	1	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	A 1.			aî.	14		
Traffic Volume (veh/h)	1007	13	8	222	12	3	
Future Volume (Veh/h)	1007	13	8	222	12	3	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	1060	14	8	234	13	3	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)	129			106			
pX, platoon unblocked					0.99		
vC, conflicting volume			1074		1317	537	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1074		1315	537	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			99		91	99	
cM capacity (veh/h)			645		146	488	
Direction, Lane #	EB 1	EB 2	WB 1	NB 1			
Volume Total	707	367	242	16			
Volume Left	0	0	8	13			
Volume Right	0	14	0	3			
cSH	1700	1700	645	168			
Volume to Capacity	0.42	0.22	0.01	0.10			
Queue Length 95th (m)	0.0	0.0	0.3	2.5			
Control Delay (s)	0.0	0.0	0.5	28.6			
Lane LOS			А	D			
Approach Delay (s)	0.0		0.5	28.6			
Approach LOS				D			
Intersection Summary							
Average Delay			0.4				
Intersection Capacity Utilization			39.8%	ICI	U Level of S	ervice	
Analysis Period (min)			15				

Solandt TIA Future Total 2021 PM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terr	y Fox Driv	е	-									PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	10	**	1	10	***	1	10	**	1
Traffic Volume (vph)	270	155	414	204	393	363	334	1569	107	75	659	125
Future Volume (vph)	270	155	414	204	393	363	334	1569	107	75	659	125
Lane Group Flow (vph)	284	163	436	215	414	382	352	1652	113	79	694	132
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	20.0	45.0	45.0	17.0	42.0	42.0	25.5	56.1	56.1	11.9	42.5	42.5
Total Split (%)	15.4%	34.6%	34.6%	13.1%	32.3%	32.3%	19.6%	43.2%	43.2%	9.2%	32.7%	32.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	15.8	33.9	33.9	13.0	31.1	31.1	20.4	61.1	61.1	8.7	46.8	46.8
Actuated g/C Ratio	0.12	0.26	0.26	0.10	0.24	0.24	0.16	0.47	0.47	0.07	0.36	0.36
V/C Ratio	0.72	0.19	0.77	0.66	0.52	0.77	0.69	0.73	0.15	0.37	0.57	0.20
Control Delay	66.1	36.1	26.7	67.1	44.3	30.8	58.5	46.3	15.5	63.5	38.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	00.1	30.1	20.7	07.1	44.3	30.0	30.3 F	40.3	13.3	03.3 F	30.U	0.9
LUS Approach Dolov	E	11 1	U	E	11 I	U	E	16 7	В	E	24.0	A
Approach LOS		41.1 D			44.1 D			40.7			34.0 C	
Approach Los	38 5	16.6	10 7	20.2	17 5	10 7	51/	115.0	35	10.7	87.5	0.0
Queue Length 95th (m)	54.3	25.8	94.7	/3.2	63.5	42.7 81 /	m61.4	100.5	m23.3	10.7	110.3	0.0
Internal Link Dist (m)	54.5	1/1 2	04.2	40.2	123.6	01.4	1101.4	170.0	1125.5	13.4	275 /	0.4
Turn Bay Length (m)	105.0	141.2	60.0	60.0	120.0	75.0	160.0	113.2	85.0	105.0	213.4	100.0
Base Canacity (ynh)	400	1057	628	325	980	562	537	2265	755	216	1207	649
Starvation Can Reductn	400	0	020	020	0	0	0	0	0	0	0	043
Spillback Can Reductn	0	0	0	0 0	0	0	0 0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.15	0.69	0.66	0.42	0.68	0.66	0.73	0.15	0.37	0.57	0.20
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to pha	ase 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 110												
Control Type: Actuated-Coordina	ted											
Maximum v/c Ratio: 0.77												
Intersection Signal Delay: 43.0				In	tersection L	OS: D						
Intersection Capacity Utilization 8	80.3%			IC	U Level of S	Service D						
Analysis Period (min) 15												
m Volume for 95th percentile qu	ueue is metereo	d by upstrea	am signal.									
Solits and Phases: 1: March R	oad & Terry Fo	x Drive										
					5.00		33					33

Ø1	🕈 Ø2 (R) 🕊	√ Ø3	₩ Ø4
11.9 s	56.1 s	17 s	45 s
105	🖉 🗘 Ø6 (R)	▶ Ø7	4 [∞] _ Ø8
25.5 s	42.5 s	20 s	42 s

Solandt TIA Future Total 2021 PM (improved) 2: March Road & Solandt Road

2: March Road & Solandt	Road		-									PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	3	*	1	ሻሻ	î,	ሻሻ	***	1	ሻሻ	***	1	
Traffic Volume (vph)	87	43	651	733	75	121	1780	90	46	1000	68	
Future Volume (vph)	87	43	651	733	75	121	1780	90	46	1000	68	
Lane Group Flow (vph)	92	45	685	772	320	127	1874	95	48	1053	72	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			Free					2			6	
Detector Phase	7	4		3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	10.9	38.5		10.9	38.5	11.3	26.3	26.3	14.0	26.3	26.3	
Total Split (s)	25.5	38.5		37.5	50.5	14.0	40.0	40.0	14.0	40.0	40.0	
Total Split (%)	19.6%	29.6%		28.8%	38.8%	10.8%	30.8%	30.8%	10.8%	30.8%	30.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.3	16.9	130.0	33.2	32.5	11.6	60.2	60.2	9.3	55.6	55.6	
Actuated g/C Ratio	0.11	0.13	1.00	0.26	0.25	0.09	0.46	0.46	0.07	0.43	0.43	
v/c Ratio	0.50	0.20	0.46	0.93	0.66	0.44	0.84	0.12	0.21	0.51	0.10	
Control Delay	63.0	49.5	10	65.6	30.7	57.0	41.1	6.9	50 1	44 4	37	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.0	49.5	1.0	65.6	30.7	57.0	41.1	6.9	50.1	44.4	3.7	
	50.0 F	D	Δ	F	C.	57.0 F	- П. П	Δ	D	 D	Δ	
Approach Delay	-	10 6		_	55 4	_	40 5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5	42.2		
Approach LOS		B			F		D			D		
Queue Length 50th (m)	23.8	11 4	0.0	105.0	464	17.2	121.3	0.5	64	104 6	0.5	
Queue Length 95th (m)	40.6	19.5	0.0	#142.3	66 1	m29.8	#273.8	m11.0	m10.5	125.8	m4 1	
Internal Link Dist (m)		90.1	0.0		43.7		219.9			189.4		
Turn Bay Length (m)			60.0			160.0	2.0.0		150 0		70.0	
Base Capacity (vph)	277	468	1477	838	641	290	2231	779	252	2061	722	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.33	0.10	0.46	0.92	0.50	0.44	0.84	0.12	0.19	0.51	0.10	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2:	:NBT and (6:SBT, Start	of Green									
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.93												
Intersection Signal Delay: 39.3				Int	tersection L	OS: D						
Intersection Capacity Utilization 88.5%				IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds ca	pacity, que	eue may be	longer.									
Queue shown is maximum after two m Volume for 95th percentile queue	o cycles. is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Road &	Solandt E	20ad										
		voau		600				-	73.4			25
14 M R				37.5 0				20 5	94			
				<u></u>				30.33				
Ø5 🕴 Ø6 (R)				Ø7	0		Ø8					

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Solandt TIA Future Total 2021 PM (improved) 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	*	1.	8	1.	*	1.			1
Traffic Volume (vph)	60	32	51	260	291	108	7	251	447
Future Volume (vph)	60	32	51	260	291	108	7	251	447
Lane Group Flow (vph)	63	103	54	306	306	118	7	264	471
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		2		6	3	8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	2	2	6	6	3	8	4	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	33.2	11.2	29.2	29.2	29.2	29.2
Total Split (s)	41.2	41.2	41.2	41.2	31.2	77.4	46.2	46.2	46.2
Total Split (%)	34.7%	34.7%	34.7%	34.7%	26.3%	65.3%	39.0%	39.0%	39.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.0	20.0	20.1	20.1	35.1	34.6	19.7	19.7	19.7
Actuated g/C Ratio	0.29	0.29	0.30	0.30	0.52	0.51	0.29	0.29	0.29
V/C Ratio	0.29	0.20	0.15	0.59	0.53	0.13	0.02	0.52	0.69
Control Delay	25.0	10.3	21.0	26.7	12.5	/.b	20.1	25.4	11.9
Queue Delay	0.0	10.0	0.0	0.0	0.0 40.5	0.0	0.0	0.0	0.0
	25.0	10.3	21.0	20.7	12.5	7.0	20.1	25.4	11.9
LUS Approach Dolov	U	15 O	U	25.0	В	A 11.1	C	16.0	Б
Approach LOS		10.9 D		20.9		11.1 D		10.0 D	
Approach LOS Oueue Length 50th (m)	50	30	18	31.2	17 7	5 8	0.6	26.8	10.0
Queue Length 95th (m)	20.7	16.5	4.0	75.7	43.7	17.0	0.0 4 1	64.3	49.6
Internal Link Dist (m)	20.1	82.0	10.7	169.8	45.7	205.2	4.1	214.4	45.0
Turn Bay Length (m)		02.0	45.0	103.0	70.0	200.2	40.0	214.4	40.0
Base Capacity (vph)	419	926	695	1002	808	1665	765	1156	1083
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.11	0.08	0.31	0.38	0.07	0.01	0.23	0.43
Intersection Summarv									
Cycle Length: 118.6									
Actuated Cycle Length: 68									
Natural Cycle: 75									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.69									
Intersection Signal Delay: 17.2				Int	ersection I	OS: B			
Intersection Capacity Utilization 73.49	%			IC	U Level of S	Service D			
Analysis Period (min) 15									
,									
Splits and Phases: 3: Legget Drive	& Solandt	Road	00.00						
400			1 02				1 04		
11 D			100				10.0		

-4 ₀₂	1 Ø3	₽ Ø4	
41.2 s	31.2 s	46.2 s	
♥ Ø6	√ Ø8		
41.2 s	77.4 s		

Solandt TIA Future Total 2021 PM (improved) 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	e										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		4	1	×.	***	1	**	**	1
Traffic Volume (vph)	26	13	30	121	19	322	33	1617	35	302	2113	50
Future Volume (vph)	26	13	30	121	19	322	33	1617	35	302	2113	50
Lane Group Flow (vph)	0	41	32	0	147	339	35	1702	37	318	2224	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	64.0	64.0	23.5	75.8	75.8
Total Split (%)	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	9.0%	49.2%	49.2%	18.1%	58.3%	58.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4 0	4 0		4 0	4.0	4 0	4.0	4.0	4.0	4.0	4 0
l ead/l ag		1.0	1.0		1.0	1.0	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	Nono	25.1	25.1	Homo	25.5	25.5	97	73.1	73.1	19.4	88.0	88.0
Actuated g/C Ratio		0.19	0.19		0.20	0.20	0.07	0.56	0.56	0.15	0.68	0.68
v/c Ratio		0.15	0.08		0.59	0.80	0.28	0.63	0.00	0.10	0.00	0.00
Control Delay		40.6	0.00		55.4	37.8	63.2	22.3	0.01	55.9	36.5	23
		-0.0 0.0	0.0		0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay		40.6	0.0		55.4	37.8	63.2	22.3	0.0	55.9	36.5	2.3
		-0.0 D	Δ		F	07.0 D	F	C.	Δ	60.5 F	00.0 D	Δ
Approach Delay		23.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		43 1	D	-	22.6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		38.2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Approach LOS		20.0 C						C.			00.2 D	
Queue Length 50th (m)		93	0.0		36.6	45.7	90	110.2	0.0	45.5	~349 5	0.0
Queue Length 95th (m)		17.5	0.0		52.4	72.9	20.9	156.9	0.0	m58.4	#419.0	m2 7
Internal Link Dist (m)		128.6	0.0		308.2	72.0	20.0	130.8	0.0	1100.1	353.3	
Turn Bay Length (m)		120.0	30.0		000.2	50.0	95.0	100.0	70.0	190.0	000.0	25.0
Base Canacity (vnh)		407	536		378	555	124	2709	888	507	2270	1008
Starvation Can Reductn		0	0		0.0	0	1	0	0	0	0	0
Spillback Can Reductn		0	0		0	ů 0	0	0 0	0	ů 0	0 0	0
Storage Can Reducto		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.39	0.61	0.28	0.63	0.04	0.63	0.98	0.05
		0.10	0.00		0.00	0.01	0.20	0.00	0.04	0.00	0.00	0.00
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	e 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 145												
Control Type: Actuated-Coordinated	t											
Maximum v/c Ratio: 0.98												
Intersection Signal Delay: 32.8				Int	tersection L	OS: C						
Intersection Capacity Utilization 91.6	6%			IC	U Level of S	Service F						
Analysis Period (min) 15												
~ Volume exceeds capacity, queu	e is theoretic	ally infinite.										
Queue shown is maximum after	two cycles.											
# 95th percentile volume exceeds	capacity, qu	eue may be	longer.									
Queue shown is maximum after	two cycles.											
m Volume for 95th percentile que	ue is metered	d by upstrea	m signal.									
Splits and Phases: 4: March Road	d & Carling A	venue										
	T.							2				



	-	7	-
Lane Group	EBT	EBR	WBT
Lane Configurations	**	1	***
Traffic Volume (vph)	168	11	973
Future Volume (vph)	168	11	973
Lane Group Flow (vph)	177	12	1024
Sign Control	Free		Free
Intersection Summary			
Control Type: Unsignalized			

Intersection Capacity Utilization 23.2% Analysis Period (min) 15

ICU Level of Service A

	-	7	*	+	1	1	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	#1			1	M		
Traffic Volume (veh/h)	166	2	2	973	64	16	
Future Volume (Veh/h)	166	2	2	973	64	16	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	175	2	2	1024	67	17	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)	129			106			
pX, platoon unblocked					0.79		
vC, conflicting volume			177		1204	88	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			177		1126	88	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		57	98	
cM capacity (veh/h)			1396		157	952	
Direction Lane #	FR 1	FB 2	WR 1	NR 1			
Volume Total	117	60	1026	84			
Volume Left	0	00	2	67			
Volume Right	0	2	0	17			
cSH	1700	1700	1396	189			
Volume to Capacity	0.07	0.04	0.00	0.44			
Queue Length 95th (m)	0.07	0.04	0.00	16.6			
Control Delay (s)	0.0	0.0	0.0	38.5			
Lane LOS	0.0	0.0	Δ	50.5 F			
Approach Delay (s)	0.0		0.0	38.5			
Approach LOS	0.0		0.0	50.5 F			
				L			
Intersection Summary							
Average Delay			2.5				
Intersection Capacity Utilization			67.2%	ICI	U Level of S	ervice	C
Analysis Period (min)			15				

Solandt TIA Future Total 2026 AM 1: March Road & Terry Fox Drive

1: March Road & Terry Fox Drive AM.syn												
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	**	**	1	**	***	1	**	**	1
Traffic Volume (vph)	122	554	296	71	142	72	282	699	169	427	1679	222
Future Volume (vph)	122	554	296	71	142	72	282	699	169	427	1679	222
Lane Group Flow (vph)	128	583	312	75	149	76	297	736	178	449	1767	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases		•	4	•	•	8	•	_	2		•	6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase		•	•	•	•	•	•	-	-	•	· ·	, i
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	16.0	42.0	42.0	16.0	42.0	42.0	25.0	47.0	47.0	25.0	47.0	47.0
Total Split (%)	12.3%	32.3%	32.3%	12.3%	32.3%	32.3%	19.2%	36.2%	36.2%	19.2%	36.2%	36.2%
Yellow Time (s)	37	37	37	37	37	37	4 6	4 6	4 6	4.6	4 6	4 6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	21	21	23	21	21
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-27	-27	-2.9	-27	-27
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
l ead/l ag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Ontimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.7	32.8	32.8	10.9	29.4	29.4	19.1	50.2	50.2	22.7	53.8	53.8
Actuated g/C Ratio	0.09	0.25	0.25	0.08	0.23	0.23	0.15	0.39	0.39	0.17	0.41	0.41
v/c Ratio	0.44	0.69	0.53	0.28	0.20	0.17	0.62	0.40	0.27	0.79	1.27	0.34
Control Delay	61.0	48.1	7.1	58.2	39.1	0.8	51.6	41.3	19.2	62.4	162.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	48.1	7.1	58.2	39.1	0.8	51.6	41.3	19.2	62.4	162.2	13.0
LOS	E	D	А	Е	D	А	D	D	В	E	F	В
Approach Delay		37.2			34.2			40.6			129.7	
Approach LOS		D			С			D			F	
Queue Length 50th (m)	17.1	76.2	0.0	9.9	17.0	0.0	42.8	48.2	7.4	58.2	~326.6	14.6
Queue Length 95th (m)	27.7	91.1	23.2	18.0	24.8	0.0	58.8	83.5	42.0	#88.4	#402.0	39.5
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	300	980	639	300	980	532	525	1859	669	568	1387	681
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.59	0.49	0.25	0.15	0.14	0.57	0.40	0.27	0.79	1.27	0.34
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 114 (88%), Referenced to r	hase 2:NBT a	and 6:SBT.	Start of Gre	en								
Natural Cycle: 150												
Control Type: Actuated-Coordinate	ed											
Maximum v/c Ratio: 1.27												
Intersection Signal Delay: 83.3				In	tersection L	OS: F						
Intersection Capacity Utilization 99	.2%			IC	U Level of S	Service F						
Analysis Period (min) 15												
~ Volume exceeds capacity, que	ue is theoretic	ally infinite.										
Queue shown is maximum after	r two cycles.											
# 95th percentile volume exceed	s capacity, qu	eue may be	e longer.									
Queue shown is maximum after	r two cycles.											
Colite and Dhapper 1. March Day	od 9 Torra C-											
opilis and Phases: 1: March Roa	au o i erry FO	x Dilve										

opine and masses minaren			
Ø1	\$\u00e92 (R)	Ø3	₩ Ø4
25 s	47 s	16 s	42 s
↑ Ø5	♥ ♥ Ø6 (R)	▶ Ø7	4 [∞] Ø8
25 s	47 s	16 s	42 s

Solandt TIA Future Total 2026 AM 2: March Road & Solandt Road

2: March Road & Soland	t Road											AM.syn
	٠	→	7	1	+	1	t	1	4	ţ	~	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	5	*	1	55	ţ,	ካካ	***	1	ካካ	***	1	
Traffic Volume (vph)	29	110	133	74	121	607	1065	808	167	1809	133	
Future Volume (vph)	29	110	133	74	121	607	1065	808	167	1809	133	
Lane Group Flow (vph)	31	116	140	78	168	639	1121	851	176	1904	140	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			Free					2			6	
Detector Phase	7	4		3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	10.9	38.5		10.9	38.5	11.3	26.3	26.3	14.0	26.3	26.3	
Total Split (s)	10.9	38.5		10.9	38.5	32.0	66.6	66.6	14.0	48.6	48.6	
Total Split (%)	8.4%	29.6%		8.4%	29.6%	24.6%	51.2%	51.2%	10.8%	37.4%	37.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	_
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	0.0	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	6.3	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	100.0	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	6.9	20.9	130.0	6.9	23.1	31.4	74.4	74.4	11./	57.0	57.0	
Actuated g/C Ratio	0.05	0.16	1.00	0.05	0.18	0.24	0.57	0.57	0.09	0.44	0.44	
v/c Ratio	0.35	0.41	0.09	0.45	0.54	0.82	0.41	0.79	0.60	0.90	0.19	
Control Delay	ν.σ	51.3	0.1	68.5	50.5	50.0	25.2	22.0	48.2	37.0	8.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I otal Delay	/0.8	51.3	0.1	68.5	50.5	50.0	25.2	22.0	48.2	37.0	ð.3 A	
LOS	E	D 00 4	А	E	D	U	ل 20.2	U	U	D 26.1	А	
Approach Delay		20.4			50.2 E		30.3			30.1		
Approach LOS	8.2	08.7	0.0	10.7	30.0	03.0	66.5	Q/L 1	25.8	107.6	53	
Queue Length Ofth (m)	10.2	20.7	0.0	10.7	55.9	93.0 m#117.7	101.7	04.1 #174.7	20.0	m107.0	5.5	
Internal Link Dist (m)	19.0	41.0	0.0	13.4	13.5	111#117.7	210.0	111#1/4./	11124.1	180 /	110.0	
Turn Bay Length (m)		90.1	60.0		40.7	160.0	219.5		150.0	105.4	70.0	
Pass Capacity (uph)	88	468	1478	172	457	786	2756	1076	203	2113	740	
Starvation Can Reducto	0	400	0	0		0	2130	0	200	2113	0	
Spillback Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Can Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.25	0.09	0 45	0.37	0.81	0 41	0 79	0.60	0.90	0 19	
	0.00	0.20	0.00	00					0.00	0.00		
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2	2:NBT and b	5:SBT, Start	of Green									
Natural Cycle: 140												
Control Type: Actuated-Coordinated												
Maximum V/c Ratio: 0.90				le/	to continue l	00.0						
Intersection Signal Delay: 33.7					ersection	105: C						
Intersection Capacity Utilization op. 77	/0				U Level of	Service E						
Analysis Period (min) 15		may ha	langar									
# 95th percentile volume exceeds of	apacity, que	sue may be	longer.									
Queue shown is maximum after two cycles. M Volume for 95th percentile queue is metered by upstream signal.												
Splits and Phases: 2: March Road	& Solandt F	łoad										55
Ø1 Ø2 (R)							10	i3 →	Ø4			_
14 s 66.6 s	_						10.9 s	38.5	s			

Solandt TIA Future Total 2026 AM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	*	Λ.	*	Δ.	*	Δ.	*		1
Traffic Volume (vph)	430	257	3	28	103	192	53	197	57
Future Volume (vph)	430	257	3	28	103	192	53	197	57
I ane Group Flow (vph)	453	524	3	38	108	261	56	207	60
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2		6		8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	2	2	6	6	8	8	4	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	33.2	29.2	29.2	29.2	29.2	29.2
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.8	28.8	25.2	25.2	18.1	18.1	18.1	18.1	18.1
Actuated g/C Ratio	0.52	0.52	0.45	0.45	0.33	0.33	0.33	0.33	0.33
v/c Ratio	0.68	0.60	0.01	0.05	0.31	0.47	0.19	0.36	0.12
Control Delay	16.5	11.6	7.3	6.0	20.0	19.3	18.5	18.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	11.6	7.3	6.0	20.0	19.3	18.5	18.8	6.2
LOS	В	В	А	А	В	В	В	В	А
Approach Delay		13.8		6.1		19.5		16.4	
Approach LOS		В		А		В		В	
Queue Length 50th (m)	29.2	26.8	0.1	1.2	8.0	19.1	4.0	15.5	0.0
Queue Length 95th (m)	78.4	71.2	1.4	6.0	26.8	53.9	15.7	44.1	8.1
Internal Link Dist (m)		82.0		169.8		205.2		214.4	
Turn Bay Length (m)			45.0		70.0		40.0		40.0
Base Capacity (vph)	1216	1540	602	1603	839	1337	721	1395	1171
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.34	0.00	0.02	0.13	0.20	0.08	0.15	0.05
Intersection Summary									
Cycle Length: 112.4									
Actuated Cycle Length: 55.6									
Natural Cycle: 65									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.68									
Intersection Signal Delay: 15.4				Ini	tersection I	OS: B			
Intersection Capacity Utilization 66	1%			IC	U Level of S	Service C			
Analysis Period (min) 15				10	0.01010				
Splits and Phases: 3: Legget Driv	ve & Solandt	Road							
4						*	a		
FØ2							04		
00.2S						46.	2.5		

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 66.2 s

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AM.syn

Solandt TIA Future Total 2026 AM 4: March Road & Carling Avenue

4: March Road & Carling	Avenu	е										AM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		4	1	2	***	1	2	**	1
Traffic Volume (vph)	63	26	9	38	12	197	90	2352	86	318	1674	123
Future Volume (vph)	63	26	9	38	12	197	90	2352	86	318	1674	123
Lane Group Flow (vph)	0	93	9	0	53	207	95	2476	91	335	1762	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	14.4	68.5	68.5	19.0	73.1	73.1
Total Split (%)	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	11.1%	52.7%	52.7%	14.6%	56.2%	56.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		20.3	20.3		20.3	20.3	13.8	77.8	77.8	19.9	83.9	83.9
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.11	0.60	0.60	0.15	0.65	0.65
v/c Ratio		0.45	0.03		0.26	0.62	0.54	0.86	0.10	0.67	0.81	0.13
Control Delay		54.1	0.2		47.7	28.1	66.6	26.8	3.8	59.1	22.8	3.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.1	0.2		47.7	28.1	66.6	26.8	3.8	59.1	22.8	3.5
LOS		D	А		D	С	E	С	А	E	С	A
Approach Delay		49.3			32.1			27.4			27.1	
Approach LOS		D			С			С			С	
Queue Length 50th (m)		23.9	0.0		13.2	22.0	24.2	186.7	0.5	49.2	88.1	0.9
Queue Length 95th (m)		34.1	0.0		21.5	40.4	#52.6	#291.5	9.9	m#58.0	#166.5	m1.9
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		394	496		388	521	177	2882	891	497	2163	956
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.24	0.02		0.14	0.40	0.54	0.86	0.10	0.67	0.81	0.13
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	2:NBT and	6:SBT, Star	rt of Green									
Natural Cycle: 135												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 28.0				In	tersection L	OS: C						
Intersection Capacity Utilization 85.0	%			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds of	capacity, qu	eue may be	e longer.									
Queue shown is maximum after to	vo cycles.											
m Volume for 95th percentile queu	e is metered	d by upstrea	am signal.									
Splits and Phases: 4: March Road	& Carling A	venue										
•ø1 • • • •	(R)							404				

Ø1	🛛 🖗 🖗 🖉 2 (R)	
19 s	68.5 s	42.5 s
05	€ 06 (R)	4 Ø8
14.4 s	73.1s	42.5 s

		>	-
		•	
Lane Group	EBT	EBR	WBT
Lane Configurations	**	1	***
Traffic Volume (vph)	1020	65	222
Future Volume (vph)	1020	65	222
Lane Group Flow (vph)	1074	68	234
Sign Control	Free		Free
Intersection Summary			
Control Type: Unsignalized			

Control Type: Unsignalized Intersection Capacity Utilization 33.1% Analysis Period (min) 15

ICU Level of Service A

AM.syn

Solandt TIA Future Total 2026 AM 6: East Access & Solandt Road

	-	7	1	+	1	1
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	A1 -			4	M	
Traffic Volume (veh/h)	1007	13	8	222	12	3
Future Volume (Veh/h)	1007	13	8	222	12	3
Sian Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1060	14	8	234	13	3
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	129			106		
pX platoon unblocked					0 99	
vC conflicting volume			1074		1317	537
vC1 stage 1 conf vol			1011		lon	001
vC2 stage 2 conf vol						
vCu unblocked vol			1074		1315	537
tC single (s)			4 1		6.8	6.9
tC. 2 stage (s)					0.0	0.0
tF (s)			22		35	33
n) queue free %			99		91	99
cM capacity (veh/h)			645		146	488
			010		110	100
Direction, Lane #	EB 1	EB 2	WB 1	NB 1		
Volume Total	707	367	242	16		
Volume Left	0	0	8	13		
Volume Right	0	14	0	3		
cSH	1700	1700	645	168		
Volume to Capacity	0.42	0.22	0.01	0.10		
Queue Length 95th (m)	0.0	0.0	0.3	2.5		
Control Delay (s)	0.0	0.0	0.5	28.6		
Lane LOS			А	D		
Approach Delay (s)	0.0		0.5	28.6		
Approach LOS				D		
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			39.8%	ICI	U Level of S	ervice
Analysis Period (min)			15			

Solandt TIA Future Total 2026 PM 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	55	**	1	55	***	1	55	**	1
Traffic Volume (vph)	310	159	424	209	402	411	334	1816	107	96	798	145
Future Volume (vph)	310	159	424	209	402	411	334	1816	107	96	798	145
Lane Group Flow (vph)	326	167	446	220	423	433	352	1912	113	101	840	153
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	20.0	45.0	45.0	17.0	42.0	42.0	25.5	56.1	56.1	11.9	42.5	42.5
Total Split (%)	15.4%	34.6%	34.6%	13.1%	32.3%	32.3%	19.6%	43.2%	43.2%	9.2%	32.7%	32.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.1	3.3	3.3	3.1	3.3	3.3	2.3	2.1	2.1	2.3	2.1	2.1
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.0	35.2	35.2	13.0	32.2	32.2	20.4	56.9	56.9	8.9	45.4	45.4
Actuated g/C Ratio	0.12	0.27	0.27	0.10	0.25	0.25	0.16	0.44	0.44	0.07	0.35	0.35
v/c Ratio	0.81	0.18	0.79	0.68	0.51	0.85	0.69	0.91	0.16	0.45	0.72	0.24
Control Delay	72.3	35.3	29.2	67.8	43.4	40.1	58.1	53.8	16.3	65.6	42.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.3	35.3	29.2	67.8	43.4	40.1	58.1	53.8	16.3	65.6	42.7	2.2
LOS	E	D	С	E	D	D	E	D	В	E	D	A
Approach Delay		45.3			47.0			52.7			39.1	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	44.8	17.0	49.6	30.0	48.7	58.9	51.4	141.7	5.7	13.8	112.0	0.0
Queue Length 95th (m)	#67.5	26.3	92.9	44.0	64.8	104.0	m54.6	m#220.4	m20.2	23.7	138.9	5.4
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	400	1057	619	325	980	562	537	2107	713	222	1171	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.16	0.72	0.68	0.43	0.77	0.66	0.91	0.16	0.45	0.72	0.24
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	se 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 120												
Control Type: Actuated-Coordinate	ed											
Maximum v/c Ratio: 0.91												
Intersection Signal Delay: 47.6				Int	tersection L	OS: D						
Intersection Capacity Utilization 86	.6%			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceed	s capacity, qu	eue may be	longer.									
Queue shown is maximum after m Volume for 95th percentile que	r two cycles. eue is metered	l by upstrea	ım signal.									
Splits and Phases: 1: March Roa	ad & Terry Fo	k Drive										
01 02 (P)	. , .	-				03	_	04				58
2. 22(1)												

Ø1	Ø2 (R) 📮	√ Ø3	₩ 04
11.9 s	56.1 s	17 s 4	5 s
105	🖉 🕈 Ø6 (R)	▶ _{Ø7}	4 [®] _ Ø8
25.5 s	42,5 s	20 s	42 s

Solandt TIA Future Total 2026 PM 2: March Road & Solandt Road

2: March Road & Solandt	March Road & Solandt Road PM.syn											
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	3		1	ካካ	T.	ካካ	***	1	ካካ	***	1	
Traffic Volume (vph)	87	43	668	733	75	121	2027	90	46	1154	68	
Future Volume (vph)	87	43	668	733	75	121	2027	90	46	1154	68	
Lane Group Flow (vph)	92	45	703	772	320	127	2134	95	48	1215	72	
Turn Type	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			Free					2			6	
Detector Phase	7	4		3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	10.9	38.5		10.9	38.5	11.3	26.3	26.3	14.0	26.3	26.3	
Total Split (s)	25.5	38.5		37.5	50.5	14.0	40.0	40.0	14.0	40.0	40.0	
Total Split (%)	19.6%	29.6%		28.8%	38.8%	10.8%	30.8%	30.8%	10.8%	30.8%	30.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	0.0	-2.3	-2.3	
Total Lost Time (s)	4 0	4 0		4 0	4 0	4 0	4 0	4 0	6.3	4.0	4 0	
lead/lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Ontimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.3	16.9	130.0	33.2	32.5	11.6	60.2	60.2	7.0	55.6	55.6	
Actuated q/C Ratio	0.11	0.13	1 00	0.26	0.25	0.09	0.46	0.46	0.05	0.43	0.43	
v/c Ratio	0.50	0.10	0.48	0.20	0.20	0.00	0.40	0.40	0.00	0.40	0.40	
Control Delay	63.0	49.5	11	65.6	30.7	54.7	49.8	67	52.0	48.0	3.5	
	0.0	45.5	0.0	0.0	0.0	0.0	45.0	0.0	0.0	-0.0	0.0	
Total Delay	63.0	/0.0	1.1	65.6	30.7	54.7	/0.0	6.7	52.0	18.0	3.5	
	00.0 E	-5.5 D	Δ	00.0 E	00.1 C	י. ר כ ח	-5.0 D	Δ	02.0 D	-0.0 D	Δ	
Approach Delay	L	10.5	~	L	55.4	D	48.3	~	D	45.7	~	
Approach LOS		10.5 R			55.4		40.0 D			4J.7		
Oueue Length 50th (m)	23 <u>8</u>	11 /	0.0	105.0	16.4	17.5	152.6	07	67	123.1	0.0	
Queue Length 95th (m)	10.6	10.5	0.0	#1/2 3	66.1	m26.1	#328.1	m7.4	mQ 3	#1/7 1	m1.0	
Internal Link Dict (m)	40.0	00.1	0.0	#142.5	/3.7	11120.1	210.0	1117.4	113.5	180 /	111.5	
Turn Bay Length (m)		30.1	60.0		43.7	160.0	219.9		150.0	109.4	70.0	
Pase Capacity (yph)	277	168	1/77	838	6/1	200	2221	770	10/	2061	70.0	
Starvation Can Poductn	211	400	1477	0.00	041	290	2231	0	194	2001	122	
Stal valion Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductin	0 22	0 10	0 40	0	0 50	0.44	0.06	0 10	0.05	0 50	0 10	
Reduced V/C Rallo	0.55	0.10	0.40	0.92	0.50	0.44	0.90	0.12	0.25	0.59	0.10	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2:	NBT and	6:SBT, Star	t of Green									
Natural Cycle: 150												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.96												
Intersection Signal Delay: 43.4				Int	tersection L	OS: D						
Intersection Capacity Utilization 95.5%				IC	U Level of S	Service F						
Analysis Period (min) 15												
# 95th percentile volume exceeds ca	pacity, qu	eue may be	longer.									
Queue shown is maximum after two	cvcles.		· 0·									
m Volume for 95th percentile queue i	is metered	d by upstrea	m signal.									
Splits and Phases: 2: March Road &	Solandt F	Road										
Ø1 Ø2 (R)				03				-	Ø4			
14 s 40 s				37.5 s				38.5	S			
1 as as (p)				1			+ 09					23 1 239 88
100 V 100 (K)				01		1	20					· · · · · · · · · · ·

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Solandt TIA Future Total 2026 PM 3: Legget Drive & Solandt Road

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	8	1.	*	1.	×	1.	×	*	1
Traffic Volume (vph)	60	32	51	260	291	114	7	264	447
Future Volume (vph)	60	32	51	260	291	114	7	264	447
Lane Group Flow (vph)	63	103	54	306	306	124	7	278	471
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		2		6	3	8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	2	2	6	6	3	8	4	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	33.2	11.2	29.2	29.2	29.2	29.2
Total Split (s)	41.2	41.2	41.2	41.2	31.2	77.4	46.2	46.2	46.2
Total Split (%)	34.7%	34.7%	34.7%	34.7%	26.3%	65.3%	39.0%	39.0%	39.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.2	20.2	20.3	20.3	35.5	35.1	20.1	20.1	20.1
Actuated g/C Ratio	0.29	0.29	0.30	0.30	0.52	0.51	0.29	0.29	0.29
v/c Ratio	0.30	0.20	0.15	0.60	0.53	0.14	0.02	0.54	0.69
Control Delay	25.4	10.4	21.3	27.0	12.6	7.6	20.1	25.8	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	10.4	21.3	27.0	12.6	7.6	20.1	25.8	11.9
LOS	С	В	С	С	В	A	С	C	В
Approach Delay		16.1		26.2		11.2		17.1	
Approach LOS		В		C	17.0	В		В	10.0
Queue Length 50th (m)	6.0	3.0	4.9	31.8	17.9	6.2	0.6	28.8	10.3
Queue Length 95th (m)	20.8	16.6	16.8	/5.9	43.7	17.8	4.1	68.0	50.1
Internal Link Dist (m)		82.0	45.0	169.8	70.0	205.2	40.0	214.4	40.0
Lorn Bay Length (m)	440	040	45.0	000	/0.0	4050	40.0	4445	40.0
Base Capacity (vph)	412	918	689	993	801	1659	/53	1145	10/6
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0
Storage Con Reductin	0	0	0	0	0	0	0	0	0
Sionage Cap Reductin	0 15	0 11	0 00	0.21	0 20	0.07	0.01	0.24	0 44
	0.15	0.11	0.00	0.51	0.30	0.07	0.01	0.24	0.44
Intersection Summary									
Cycle Length: 118.6									
Actuated Cycle Length: 68.6									
Natural Cycle: 75									
Control Type: Semi Act-Uncoord									
Interpretion Signal Dalay 17.4				ا ما	or antion L	00.0			
Intersection Signal Delay: 17.4	0/_			Int	Lersection L	US: B			
Analysis Deried (min) 15	/0			IC	U Level of S	Service D			
Analysis Peliou (min) 15									
Splits and Phases: 3: Legget Drive	& Solandt	Road							
<u>,</u>			*				1		
•Ø2			1Ø3				₹ Ø4		

-4 _{Ø2}	1 Ø3	
41.2 s	31.2 s	46.2 s
★ Ø6	√ Ø8	
41.2 s	77.4 s	

Solandt TIA Future Total 2026 PM 4: March Road & Carling Avenue

4: March Road & Carlir	ng Avenue	Э										PM.syn
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	1		1	1	3	***	1	**	**	1
Traffic Volume (vph)	27	13	30	124	19	329	34	1856	36	302	2284	50
Future Volume (vph)	27	13	30	124	19	329	34	1856	36	302	2284	50
Lane Group Flow (vph)	0	42	32	0	151	346	36	1954	38	318	2404	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	42.5	42.5	42.5	42.5	42.5	42.5	11.7	64.0	64.0	23.5	75.8	75.8
Total Split (%)	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	9.0%	49.2%	49.2%	18.1%	58.3%	58.3%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		25.7	25.7		26.1	26.1	9.7	72.5	72.5	19.4	87.3	87.3
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.07	0.56	0.56	0.15	0.67	0.67
v/c Ratio		0.16	0.08		0.59	0.81	0.29	0.73	0.04	0.66	1.07	0.05
Control Delay		40.2	0.4		54.8	39.1	63.2	25.3	0.1	57.1	61.9	2.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		40.2	0.4		54.8	39.1	63.2	25.3	0.1	57.1	61.9	2.2
LOS		D	A		D	D	E	С	A	E	E	А
Approach Delay		23.0			43.9			25.5			60.2	
Approach LOS		С			D			С			E	
Queue Length 50th (m)		9.5	0.0		37.4	48.5	9.3	140.2	0.0	45.8	~408.7	0.0
Queue Length 95th (m)		17.9	0.0		53.6	76.7	21.4	194.5	0.0	m58.6	#470.6	m1.9
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		405	536		377	553	125	2685	881	507	2251	1001
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.10	0.06		0.40	0.63	0.29	0.73	0.04	0.63	1.07	0.05
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%) Referenced to phase	o 2.NBT and	6.CBT Star	t of Green									
Natural Cycle: 145		0.001, 0101										
Control Type: Actuated Coordinate	be											
Maximum v/c Patio: 1.07	5u											
Intersection Signal Delay: 15.1				Ini	torsaction L	09·D						
Intersection Capacity Litilization 96	8%					Sonvica E						
Analysis Period (min) 15	1.0 /0			10								
	ue is theoretic	ally infinita										
Queue shown is maximum after	r two cycles	any minine.										
# 95th percentile volume exceed	s canacity and		longer									
	r two oveloe	cue may be	longer.									
m Volume for 95th percentile que	eue is metered	l by upstrea	m signal.									
Splits and Phases: 4: March Ro	ad & Carling A	venue					_					
	†							1				52

 Ø1
 Ø2 (R)

 23.5 s
 64 s

 Ø5
 Ø6 (R)

 Ø5
 Ø6 (R)

 Ø5
 75.8 s

	_	>	-
_	86466	•	
Lane Group	EBT	EBR	WBT
Lane Configurations	**	1	***
Traffic Volume (vph)	168	11	973
Future Volume (vph)	168	11	973
Lane Group Flow (vph)	177	12	1024
Sign Control	Free		Free
-			
Intersection Summary			
Control Type: Unsignalized			

Intersection Capacity Utilization 23.2% Analysis Period (min) 15

ICU Level of Service A

Solandt TIA Future Total 2026 PM 6: East Access & Solandt Road

PM.syn

Solandt TIA Future Total 2026 AM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry	Fox Driv	е										AM.syn
	٨	-	7	1	+	*	1	1	1	4	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	55	**	1	**	**	1	**	***	1	55	***	1
Traffic Volume (vph)	122	554	296	71	142	72	282	699	169	427	1679	222
Future Volume (vph)	122	554	296	71	142	72	282	699	169	427	1679	222
Lane Group Flow (vph)	128	583	312	75	149	76	297	736	178	449	1767	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	12.1	46.1	46.1	12.1	46.1	46.1	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	12.1	46.1	46.1	12.1	46.1	46.1	17.0	42.2	42.2	29.6	54.8	54.8
Total Split (%)	9.3%	35.5%	35.5%	9.3%	35.5%	35.5%	13.1%	32.5%	32.5%	22.8%	42.2%	42.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.4	3.4	3.4	3.4	3.4	3.4	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	4.3	4.1	4.1	4.3	4.1	4.1	3.6	3.8	3.8	3.6	3.8	3.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.8	34.0	34.0	7.8	31.6	31.6	16.7	50.4	50.4	24.4	58.1	58.1
Actuated g/C Ratio	0.06	0.26	0.26	0.06	0.24	0.24	0.13	0.39	0.39	0.19	0.45	0.45
v/c Ratio	0.66	0.66	0.58	0.38	0.18	0.15	0.71	0.39	0.26	0.74	0.82	0.31
Control Delay	76.1	46.1	15.9	64.8	37.0	0.6	61.5	31.1	8.0	57.5	37.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.1	46.1	15.9	64.8	37.0	0.6	61.5	31.1	8.0	57.5	37.0	5.0
LOS	E	D	В	E	D	A	E	С	A	E	D	A
Approach Delay		40.6			34.7			35.1			37.7	
Approach LOS		D			С			D			D	
Queue Length 50th (m)	17.7	76.1	20.4	10.2	16.7	0.0	42.9	39.1	6.4	58.5	160.0	1.9
Queue Length 95th (m)	#30.4	86.8	47.1	18.7	23.6	0.0	#69.3	56.8	20.4	77.4	#194.1	18.8
Internal Link Dist (m)		141.2			123.6			179.2			275.4	
Turn Bay Length (m)	105.0		60.0	60.0		75.0	160.0		85.0	105.0		100.0
Base Capacity (vph)	195	1083	613	195	1083	608	418	1867	687	650	2151	764
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.54	0.51	0.38	0.14	0.13	0./1	0.39	0.26	0.69	0.82	0.31
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase	e 2:NBT and	6:SBT, Star	t of Green									
Natural Cycle: 115		,										
Control Type: Actuated-Coordinated	d											
Maximum v/c Ratio: 0.82												
Intersection Signal Delay: 37.5				Int	ersection L	OS: D						
Intersection Capacity Utilization 86.	9%			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds Queue shown is maximum after	s capacity, qu two cycles.	eue may be	longer.									
Splits and Phases: 1: March Roa	d & Terry Fo	CDrive										
Ø1	• to	2 (R)				1 03	*	Ø4				

Ø1	🥊 🛛 Ø2 (R)	🕈 Ø:	3 💿 🕖 4			
29.6 s	42.2 s	12.1 s	46.1 s			
•		1	+	2	S. 80 (1998)	1
105	V Ø6 (R)	Ø	/ Ø8		_	_
17 s	54.8 s	12.1 s	46.1 s			

Solandt TIA Future Total 2026 AM (improved) 2: March Road & Solandt Road

2: March Road & Solandt	Road	、 ·	,									AM.syn
	≯	+	1	1	ł	1	Ť	1	1	ŧ	4	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	٠	1	**	1.	**	***	1	**	***	1	
Traffic Volume (vph)	29	110	133	74	121	607	1065	808	167	1809	133	
Future Volume (vph)	29	110	133	74	121	607	1065	808	167	1809	133	
Lane Group Flow (vph)	31	116	140	78	168	639	1121	851	176	1904	140	
	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4	1100	3	8	5	2	i onn	1	6	i onn	
Permitted Phases	,	т	Froo	Ū	Ū	Ū	2	2		U	6	
Dotoctor Phase	7	1	1100	3	Q	5	2	2	1	6	6	
Switch Phase	1	4		5	0	J	2	۷	1	0	0	
Minimum Initial (a)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	Б ()	20.0	20.0	
Minimum muar(s)	0.C	10.0		10.0	10.0	0.0	20.0	20.0	5.0	20.0	20.0	
Minimum Split (s)	10.9	38.5		10.9	38.5	11.3	20.3	20.3	14.0	20.3	20.3	
Total Split (s)	10.9	38.5		10.9	38.5	32.0	66.6	66.6	14.0	48.6	48.6	
Total Split (%)	8.4%	29.6%		8.4%	29.6%	24.6%	51.2%	51.2%	10.8%	37.4%	37.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	0.0	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	6.3	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	6.9	20.9	130.0	6.9	23.1	31.4	74.4	74.4	11.7	57.0	57.0	
Actuated g/C Ratio	0.05	0.16	1 00	0.05	0.18	0.24	0.57	0.57	0 09	0 44	0 44	
v/c Ratio	0.35	0.41	0.09	0.45	0.54	0.82	0.41	0.79	0.60	0.90	0.19	
Control Delay	70.8	51.3	0.00	68.5	50.5	52.3	24.8	21.8	49.9	46.6	11.3	
	0.0	0.0	0.1	00.5	0.0	0.0	24.0	21.0	40.0	0.0	0.0	
Total Dolay	70.8	51.3	0.0	68.5	50.5	52.3	2/1.9	21.8	10.0	16.6	11.3	
	70.0 E	J1.J	0.1	00.J	JU.J	JZ.J	24.0	21.0	49.9	40.0	D II.J	
LUS Annraech Deley	E	20.4	A	E	56.0	D	20 5	U	U	44.7	D	
Approach LOC		20.4			50.Z		30.5			44.7		
Approach LOS	0.0	00.7	0.0	10 7	20 0	04.2		00.4	04.0	124 Z	07	
Queue Length Suth (m)	8.2	28.7	0.0	10.7	39.9	94.3	62.4	80.4	24.9	134.7	0./	
Queue Length 95th (m)	19.3	41.8	0.0	19.4	55.9	m#112.6	98.0	m166.2	m#37.9	#246.1	m14.9	
Internal Link Dist (m)		90.1			43.7		219.9		4=0.0	189.4		
Turn Bay Length (m)			60.0		•	160.0			150.0		70.0	
Base Capacity (vph)	88	468	1478	172	457	786	2756	1076	293	2113	740	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.25	0.09	0.45	0.37	0.81	0.41	0.79	0.60	0.90	0.19	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130	NOT 1		(0									
Offset: 0 (0%), Referenced to phase 2	INBI and	6:SBT, Starl	of Green									
Natural Cycle: 140												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.90												
Intersection Signal Delay: 37.5				Int	ersection I	LOS: D						
Intersection Capacity Utilization 85.7%	,)			IC	U Level of	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds ca	apacity, qu	eue may be	longer.									
Queue shown is maximum after tw	o cycles.	•	-									
m Volume for 95th percentile queue	is metered	l by upstrea	m signal.									
Splits and Phases: 2: March Road &	& Solandt F	Road										
Ø1 Ø2 (R)							f ø:	3 -	Ø4			
14 s 66.6 s							10.9 s	38.5	s			

🗖 🛛 👘 🖉 🖉 🖉		🕈 Ø3	Ø4	
14 s 66.6 s		10.9 s	38.5 s	
1 Ø5	Ø6 (R)	▶ Ø7	4 Ø8	
32 s	48.6 s	10.9 s	38.5 s	

Solandt TIA Future Total 2026 AM (improved) 3: Legget Drive & Solandt Road

3: Legget Drive & Soland	t Road									AM.syn
	٠	→	1	ł	1	Ť	4	ţ	~	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	1	1.	3	1.	1	1.	1	•	1	
Traffic Volume (vph)	430	257	3	28	103	192	53	197	57	
Future Volume (vph)	430	257	3	28	103	192	53	197	57	
Lane Group Flow (vph)	453	524	3	38	108	261	56	207	60	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases		2		6		8		4		
Permitted Phases	2		6		8		4		4	
Detector Phase	2	2	6	6	8	8	4	4	4	
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	33.2	33.2	33.2	33.2	29.2	29.2	29.2	29.2	29.2	
Total Split (s)	66.2	66.2	66.2	66.2	46.2	46.2	46.2	46.2	46.2	
Total Split (%)	58.9%	58.9%	58.9%	58.9%	41.1%	41.1%	41.1%	41.1%	41.1%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag										
Lead-Lag Optimize?	Maria	Maria	NI	N.L	Maria	Nexa	N	NI	Nexes	
Recall Mode	None	None	None	None	None	None	None	None	None	
Act Effect Green (s)	28.8	28.8	25.2	25.2	18.1	18.1	18.1	18.1	18.1	
Actuated g/C Ratio	0.52	0.52	0.45	0.45	0.33	0.33	0.33	0.33	0.33	
V/C Ratio	0.00	0.60	0.01	0.05	0.31	0.47	10.19	0.30	0.12	
	10.0	0.0	1.5	0.0	20.0	19.5	0.0	10.0	0.2	
Queue Delay	16.5	11.6	0.0	0.0	20.0	10.2	10.0	10.0	0.0	
	10.J	П.0 D	1.5	0.0	20.0 D	19.J	10.J	10.0 D	0.2	
Approach Delay	В	13.8	~	61	В	10.5	В	16.4	A	
Approach LOS		10.0 R		Δ		13.5 R		10.4 R		
Oueue Length 50th (m)	29.2	26.8	0.1	12	8.0	19.1	40	15.5	0.0	
Queue Length 95th (m)	78.4	71.2	14	6.0	26.8	53.9	15.7	44 1	8.1	
Internal Link Dist (m)	10.4	82.0	1.4	169.8	20.0	205.2	10.1	214.4	0.1	
Turn Bay Length (m)		02.0	45 0	100.0	70.0	200.2	40.0	2	40.0	
Base Canacity (vnh)	1216	1540	602	1603	839	1337	721	1395	1171	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.34	0.00	0.02	0.13	0.20	0.08	0.15	0.05	
Intersection Summary										
Cycle Length: 112.4										
Actuated Cycle Length: 55.6										
Natural Cycle: 65										
Control Type: Semi Act-Uncoord										
Maximum v/c Ratio: 0.68										
Intersection Signal Delay: 15.4				In	tersection L	OS: B				
Intersection Capacity Utilization 66.1%)			IC	U Level of S	Service C				
Analysis Period (min) 15										
Splits and Phases: 3: Legget Drive	& Solandt	Road								
4						*				
- W2							04			

Solandt TIA Future Total 2026 AM (improved) 4: March Road & Carling Avenue

4: March Road & Carling	g Avenu	e	-									AM.syn
	٨	-	7	1	+	*	1	1	1	4	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		et l	1		et l	1	٦	***	1	ካካ	***	1
Traffic Volume (vph)	63	26	9	38	12	197	90	2352	86	318	1674	123
Future Volume (vph)	63	26	9	38	12	197	90	2352	86	318	1674	123
Lane Group Flow (vph)	0	93	9	0	53	207	95	2476	91	335	1762	129
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	46.9	46.9	46.9	46.9	46.9	46.9	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	46.9	46.9	46.9	46.9	46.9	46.9	18.0	66.1	66.1	17.0	65.1	65.1
Total Split (%)	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	13.8%	50.8%	50.8%	13.1%	50.1%	50.1%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.4	4.4		4.4	4.4	3.8	3.9	3.9	3.8	3.9	3.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		21.0	21.0		21.0	21.0	14.1	75.7	75.7	21.2	82.8	82.8
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.11	0.58	0.58	0.16	0.64	0.64
v/c Ratio		0.43	0.03		0.25	0.55	0.52	0.88	0.10	0.63	0.57	0.14
Control Delay		52.6	0.2		46.6	16.1	65.2	29.1	3.9	55.8	13.8	5.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		52.6	0.2		46.6	16.1	65.2	29.1	3.9	55.8	13.8	5.9
LOS		D	A		D	В	E	С	A	E	В	A
Approach Delay		47.9			22.3			29.5			19.7	
Approach LOS		D			C			С			В	
Queue Length 50th (m)		23.9	0.0		13.2	10.1	24.3	192.3	0.4	49.2	46.6	2.5
Queue Length 95th (m)		32.5	0.0		20.5	27.5	43.5	#300.2	10.1	m#64.7	69.4	m4.7
Internal Link Dist (m)		128.6			308.2			130.8			353.3	
Turn Bay Length (m)			30.0			50.0	95.0		70.0	190.0		25.0
Base Capacity (vph)		435	538		427	593	194	2804	870	530	3068	944
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.21	0.02		0.12	0.35	0.49	0.88	0.10	0.63	0.57	0.14
Intersection Summary												
Cycle Length: 130 Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase Natural Cycle: 140	2:NBT and	6:SBT, Sta	t of Green									
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.88						~ ~						
Intersection Signal Delay: 25.3	0/			In	tersection L							
Intersection Capacity Utilization 86.6	5%			IC	U Level of S	Service E						
Analysis Period (min) 15												
# 95th percentile volume exceeds	capacity, qu	eue may be	e longer.									
Queue shown is maximum after t m Volume for 95th percentile queu	wo cycles. ie is metered	d by upstrea	am signal.									
Splits and Phases: 4 March Road	& Carling A	venue	č									
								22				20
Ø1 Ø2 (F	२)						-	Ø4				
1/s 66.1s							46.9	S				

Ø1	📕 🛛 Ø2 (R)	₩ Ø4	
17 s	66.1s	46.9 s	
105	Ø6 (R)	₽ Ø8	
18 s	65.1s	46.9 s	

-	7	+
EBT	EBR	WBT
**	1	***
1020	65	222
1020	65	222
1074	68	234
Free		Free
	EBT 1020 1020 1074 Free	EBT EBR 1020 65 1020 65 1074 68 Free

Control Type: Unsignalized Intersection Capacity Utilization 33.1% Analysis Period (min) 15

ICU Level of Service A

AM.syn

	-	7	1	+	1	1	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	A1			1	W.		
Traffic Volume (veh/h)	1007	13	8	222	12	3	
Future Volume (Veh/h)	1007	13	8	222	12	3	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	1060	14	8	234	13	3	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)	129			106			
pX, platoon unblocked					0.99		
vC, conflicting volume			1074		1317	537	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1074		1315	537	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			99		91	99	
cM capacity (veh/h)			645		146	488	
Direction. Lane #	EB 1	EB 2	WB 1	NB 1			
Volume Total	707	367	242	16			
Volume Left	0	0	8	13			
Volume Right	0	14	0	3			
cSH	1700	1700	645	168			
Volume to Capacity	0.42	0.22	0.01	0.10			
Queue Length 95th (m)	0.0	0.0	0.3	2.5			
Control Delay (s)	0.0	0.0	0.5	28.6			
Lane LOS			A	D			
Approach Delay (s)	0.0		0.5	28.6			
Approach LOS				D			
Intersection Summary							
Average Delay			0.4				
Intersection Capacity Utilization			39.8%	ICI	U Level of S	ervice	А

15

Analysis Period (min)

Solandt TIA Future Total 2026 PM (improved) 1: March Road & Terry Fox Drive

1: March Road & Terry Fox Drive PM:											PM.syn	
	٠	→	1	4	+	*	1	1	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	**	**	1	55	**	1	55	***	1	**	***	1
Traffic Volume (vph)	310	159	424	209	402	411	334	1816	107	96	798	145
Future Volume (vph)	310	159	424	209	402	411	334	1816	107	96	798	145
Lane Group Flow (vph)	326	167	446	220	423	433	352	1912	113	101	840	153
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	11.8	42.0	42.0	11.8	42.0	42.0	11.9	32.7	32.7	11.9	32.7	32.7
Total Split (s)	18.0	45.0	45.0	15.0	42.0	42.0	24.9	58.1	58.1	11.9	45.1	45.1
Total Split (%)	13.8%	34.6%	34.6%	11.5%	32.3%	32.3%	19.2%	44.7%	44.7%	9.2%	34.7%	34.7%
Yellow Time (s)	3.7	3.3	3.3	3.3	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2	3.2	1.7	1.7	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	-2.8	-3.0	-3.0	-2.8	-3.0	-3.0	-2.9	-2.7	-2.7	-2.9	-2.7	-2.7
Total Lost Time (s)	3.5	3.5	3.5	3.1	3.9	3.9	3.4	3.6	3.6	3.4	3.6	3.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.5	36.3	36.3	11.9	32.9	32.9	20.4	58.9	58.9	9.3	47.8	47.8
Actuated g/C Ratio	0.11	0.28	0.28	0.09	0.25	0.25	0.16	0.45	0.45	0.07	0.37	0.37
v/c Ratio	0.90	0.18	0.77	0.74	0.50	0.87	0.69	0.88	0.16	0.44	0.47	0.24
Control Delay	84.8	34.6	27.5	73.1	42.7	44.2	62.8	47.2	15.4	64.4	34.0	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.8	34.6	27.5	73.1	42.7	44.2	62.8	47.2	15.4	64.4	34.0	2.8
LOS	F	C	С	E	D	D	E	D	В	E	C	A
Approach Delay		48.7			49.5			48.0			32.4	
Approach LOS	1E 1	17 O	10 E	20.2	U 49.7	GE O	F1 0	110 1	26	10 7	69.0	0.0
Queue Length 95th (m)	40.4 #70.0	26.1	40.0	30.3 #17.4	40.7	00.0 #110.5	01.9 m55.1	m100.0	0.0 m10.5	13.7	00.2	0.0
Internal Link Dist (m)	#12.3	1/1 2	91.5	#47.4	123.6	#112.5	11155.1	170.0	1119.5	23.0	275 /	0.7
Turn Bay Length (m)	105.0	141.2	60.0	60.0	123.0	75.0	160.0	179.2	85.0	105.0	21 J.4	100.0
Base Canacity (yph)	362	1070	626	207	082	5/18	538	2182	725	232	1771	647
Starvation Can Reductn	0	0	020	237	0	0+0	0	0	0	252	0	047
Spillback Can Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.16	0.71	0.74	0.43	0.79	0.65	0.88	0.16	0.44	0.47	0.24
Intersection Summary												
Actuated Cycle Length: 130												
Offset: 0 (0%) Referenced to phase	o 2·NRT and	6.SBT Star	t of Green									
Natural Cycle: 120		0.001, 0101										
Control Type: Actuated-Coordinate	d											
Maximum v/c Ratio: 0.90	u											
Intersection Signal Delay: 45.3				Int	ersection I	OS D						
Intersection Capacity Utilization 86	6%			IC	Ulevelof	Service F						
Analysis Period (min) 15	070			10	C LOTOI OI	COLLICO E						
# 95th percentile volume exceeds	s capacity, qu	eue mav be	longer.									
Queue shown is maximum after	two cvcles.		longon									
m Volume for 95th percentile que	ue is metered	l by upstrea	m signal.									
Splits and Phases: 1: March Roa	d & Terry Fo	k Drive										
A1 (0)						603		174				20 20
DI DE UV					_		_					

Ø1	Ø2 (R) 🛡	✓ Ø3 → Ø4	
11.9 \$ 58	3.1s	15 s 45 s	
105	📕 🕈 Ø6 (R)	▶ _{Ø7} [▲] _{Ø8}	
24.9 s	45.1 s	18 s 42 s	

Solandt TIA Future Total 2026 PM (improved) 2: March Road & Solandt Road

2: March Road & Solandt	Road	、 ·	,									PM.syn
	٠	→	7	1	+	1	Ť	1	4	ŧ	1	
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	1	*	1	11	1.	17	***	1	77	***	1	
Traffic Volume (vph)	87	43	668	733	75	121	2027	90	46	1154	68	
Future Volume (vph)	87	43	668	733	75	121	2027	90	46	1154	68	
Lane Group Flow (vph)	92	45	703	772	320	127	2134	95	48	1215	72	
	Prot	NA	Free	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases	,	-	Free	Ū	Ū	Ū	2	2		U	6	
Detector Phase	7	1	1166	3	8	5	2	2	1	6	6	
Switch Phase	1	-		J	0	5	2	2	1	0	0	
Minimum Initial (c)	5.0	10.0		5.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0	
Minimum Colit (c)	10.0	10.0		10.0	10.0	11.2	20.0	20.0	11.2	20.0	20.0	
Tatal Onlit (s)	10.9	45.5		10.9	40.0	11.0	20.3	20.3	11.0	20.3	20.3	
Total Split (S)	29.9	45.5		30.9	52.5	11.0	30.3	30.3	11.3	30.0	30.0	
l otal Split (%)	23.0%	35.0%		28.4%	40.4%	8.9%	27.9%	27.9%	8.1%	21.1%	21.1%	
Yellow Lime (s)	3.3	3.3		3.3	3.3	4.6	4.6	4.6	4.6	4.6	4.6	
All-Red Time (s)	2.6	3.2		2.6	3.2	1.7	1.7	1.7	1.7	1.7	1.7	
Lost Time Adjust (s)	-1.9	-2.5		-1.9	-2.5	-2.3	-2.3	-2.3	0.0	-2.3	-2.3	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	6.3	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	16.9	130.0	32.8	32.1	12.6	60.3	60.3	7.3	55.0	55.0	
Actuated g/C Ratio	0.11	0.13	1.00	0.25	0.25	0.10	0.46	0.46	0.06	0.42	0.42	
v/c Ratio	0.50	0.20	0.48	0.94	0.66	0.40	0.96	0.12	0.26	0.60	0.10	
Control Delay	62.9	49.5	1.1	67.6	30.6	50.7	54.3	7.9	50.9	48.7	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.9	49.5	11	67.6	30.6	50.7	54.3	7.9	50.9	48.7	5.2	
	62.0 F	10.0 D	Δ	F	C.	D	0 1.0 D	Δ	D	D	Δ	
Approach Delay	-	10 5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-	56.8	J	52.2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	D	46.4	~	
Approach LOS		R			50.0 F		02.2 D			чо.ч П		
Oueue Length 50th (m)	23.7	11 4	0.0	105.7	46.0	17 7	176 5	10	6.0	122.1	18	
Queue Length 95th (m)	40.6	10.5	0.0	#1// 5	40.0 65.0	m2/1.8	#331.5	m7.6	m11 /	#162.0	m6.2	
Internal Link Dist (m)	40.0	00.1	0.0	#144.5	13.7	11124.0	π001.0 210.0	1117.0	1111.4	180 /	110.2	
Turn Pay Longth (m)		90.1	60.0		43.7	160.0	219.9		150.0	109.4	70.0	
Dage Connecting (mith)	222	500	00.0	000	000	100.0	0004	770	100.0	0007	70.0	
Base Capacity (vpn)	333	503	14//	823	000	314	2234	119	183	2037	/ 15	
Starvation Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Spiliback Cap Reductin	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.28	0.08	0.48	0.94	0.48	0.40	0.96	0.12	0.26	0.60	0.10	
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%) Referenced to phase 2	·NRT and	6.SBT Star	t of Green									
Natural Cycle: 1/5		0.001, 0101										
Control Type: Actuated Coordinated												
Movimum v/a Dation 0.06												
Interpretion Cignal Delay: 45 5				الما	araatian L	00.0						
Intersection Signal Delay, 45.5				10		US. D						
Intersection Capacity Utilization 95.5%)			IC	U Level of a	Service F						
Analysis Period (min) 15	.,											
# 95th percentile volume exceeds ca	apacity, qu	eue may be	longer.									
Queue shown is maximum after two	o cycles.											
m Volume for 95th percentile queue	is metered	by upstrea	m signal.									
Splits and Phases: 2: March Road 8	& Solandt F	Road	-				-					80
🕨 🕖 💋 🖗 🖉 🖉			1	Ø3			-	Ø 4				
11.3 s 36.3 s			36,9 s	1			45.	5 s				

Ø1	Ø2 (R)	√ Ø3	→ Ø4
11.3 s	36.3 s	36.9 s	45.5 s
105	🛛 🗘 Ø6 (R)	▶ Ø7	← Ø8
11.6 s	36 s	29.9 s	i2.5 s

Solandt TIA Future Total 2026 PM (improved) 3: Legget Drive & Solandt Road

	٠	+	4	Ļ	1	Ť	1	Ļ	~
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	×.	1.	×.	1	K	1.	×.	٨	1
Traffic Volume (vph)	60	32	51	260	291	114	7	264	447
Future Volume (vph)	60	32	51	260	291	114	7	264	447
Lane Group Flow (vph)	63	103	54	306	306	124	7	278	471
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		2		6	3	8		4	
Permitted Phases	2		6		8		4		4
Detector Phase	2	2	6	6	3	8	4	4	4
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	33.2	33.2	33.2	33.2	11.2	29.2	29.2	29.2	29.2
Total Split (s)	41.2	41.2	41.2	41.2	31.2	77.4	46.2	46.2	46.2
Total Split (%)	34.7%	34.7%	34.7%	34.7%	26.3%	65.3%	39.0%	39.0%	39.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.2	20.2	20.3	20.3	35.5	35.1	20.1	20.1	20.1
Actuated g/C Ratio	0.29	0.29	0.30	0.30	0.52	0.51	0.29	0.29	0.29
v/c Ratio	0.30	0.20	0.15	0.60	0.53	0.14	0.02	0.54	0.69
Control Delay	25.4	10.4	21.3	27.0	12.6	7.6	20.1	25.8	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I otal Delay	25.4	10.4	21.3	27.0	12.6	7.6	20.1	25.8	11.9
LOS	С	B	С	000	В	A	С	C	В
Approach Delay		16.1		26.2		11.2		17.1	
Approach LOS	<u> </u>	B	4.0	24.0	47.0	B	0.0	B	10.2
	0.0	3.0	4.9	31.8	17.9	0.2	0.6	20.0	10.3
Laternel Link Diet (m)	2U.ŏ	0.01	10.Ö	10.9	43./	17.0 205.0	4.1	00.0	SU. 1
Turn Roy Longth (m)		02.0	15 0	109.0	70.0	205.2	10.0	Z14.4	10.0
Pase Capacity (mb)	/10	010	40.U 600	002	0.0	1650	40.0	11/5	40.0
Starvation Can Reducto	412	910	009	993	001	1059	155	1145 0	1070
Snillback Can Reductn	0	0	0	0	0	0	0	0	0
Storage Can Reducto	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0 15	0 11	0.08	0.31	0.38	0.07	0.01	0.24	0 44
	0110	••••	0.00	0.01	0.00	0.01	0101	0.2.1	••••
Cycle Length: 118.6									
Actuated Cycle Length: 68.6									
Natural Cycle: 75									
Control Type: Semi Act-Uncoord									
Maximum v/c Ratio: 0.69									
Intersection Signal Delay: 17.4				Int	ersection L	OS B			
Intersection Capacity Utilization 73.4°	%					Service D			
Analysis Period (min) 15	, , , , , , , , , , , , , , , , , , ,								
Splits and Phases: 3: Legget Drive	& Solandt	Road							
 Ø2		10.000	103				Ø4		

-4 ₀₂	1 Ø3	₽ Ø4	
41.2 s	31.2 s	46.2 s	
Ø6	√1 ø8		
41.2 s	77.4 s		

Solandt TIA Future Total 2026 PM (improved) 4: March Road & Carling Avenue

	٠	-	7	1	+	*	1	t	1	4	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		â	1		â	1	×	***	1	**	***	1
Traffic Volume (vph)	26	13	30	124	19	330	34	1856	36	302	2284	50
Future Volume (vph)	26	13	30	124	19	330	34	1856	36	302	2284	50
Lane Group Flow (vph)	0	41	32	0	151	347	36	1954	38	318	2404	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	46.9	46.9	46.9	46.9	46.9	46.9	11.7	30.6	30.6	11.7	30.6	30.6
Total Split (s)	46.9	46.9	46.9	46.9	46.9	46.9	11.7	63.4	63.4	19.7	71.4	71.4
Total Split (%)	36.1%	36.1%	36.1%	36.1%	36.1%	36.1%	9.0%	48.8%	48.8%	15.2%	54.9%	54.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	1.9	1.9	1.9	1.9	1.9	1.9
Lost Time Adjust (s)		-2.5	-2.5		-2.5	-2.5	-2.7	-2.6	-2.6	-2.7	-2.6	-2.6
Total Lost Time (s)		4.4	4.4		4.4	4.4	3.8	3.9	3.9	3.8	3.9	3.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	Nono	28.0	28.0	Hono	28.7	28.7	9.8	70.3	70.3	19.0	84.6	84.6
Actuated q/C Ratio		0.22	0.22		0.22	0.22	0.08	0.54	0.54	0.15	0 65	0 65
v/c Ratio		0.22	0.22		0.22	0.22	0.00	0.54	0.04	0.15	0.00	0.05
Control Delay		37.5	0.00		10.04 10 0	41.6	63.1	27.2	0.04	62.3	20.7	2.0
		0.0	0.0		40.0	0.0	0.0	0.0	0.1	02.0	0.0	2.0
Total Delay		37.5	0.0		10.0	/16	63.1	27.2	0.0	62.3	20.7	2.0
		J7.J	0.5		43.3 D	41.0 D	00.1 E	21.2	0.1	02.J	20.1	2.0
Approach Delay		21.2	~		11 1	U	L	27.3	A	L	25.1	A
Approach LOS		21.2			44.1 D			21.5			23.1	
Approach 2005		0.0	0.0		36.4	55.8	03	1/8 0	0.0	45.0	111.0	0.0
Queue Length 95th (m)		9.0 16.6	0.0		51.4	01.0	9.0	140.0	0.0	4J.9 m#50.7	#1/0.0	0.0 m1.0
Queue Lengui 95(ii (iii)		10.0	0.0		200.0	01.1	21.4	120.0	0.0	11#39.7	#140.Z	1111.0
Turn Day Longth (m)		120.0	20.0		JU0.Z	50.0	05.0	130.0	70.0	100.0	<u> </u>	25.0
Turn Bay Length (m)		450	50.0		447	50.0	95.0	0004	70.0	190.0	2422	25.0
Base Capacity (vpn)		450	5/4		417	5/5	125	2604	859	4/4	3133	972
Starvation Cap Reductin		0	0		0	0	0	0	0	0	0	0
Spiliback Cap Reductin		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.09	0.06		0.36	0.60	0.29	0.75	0.04	0.67	0.77	0.05
Intersection Summary												
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 0 (0%), Referenced to phase 2	2:NBT and	6:SBT, Star	rt of Green									
Natural Cycle: 120												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.80												
Intersection Signal Delay: 27.6				Int	tersection L	OS: C						
Intersection Capacity Utilization 81.0%	6			IC	U Level of S	Service D						
Analysis Period (min) 15												
# 95th percentile volume exceeds c	apacity, qu	eue may be	e longer.									
Queue shown is maximum after tw	o cycles.		-									
m Volume for 95th percentile queue	e is metered	d by upstrea	am signal.									
Splits and Phases: 4: March Road	& Carling A	venue										
	(D)					1.1.1	1	73.4				26
19.7 s 63.4 s	(K)						46.9	s S				
•						100	43	200				1.00
	-	7	-									
----------------------------	------	-----	------									
Lane Group	EBT	EBR	WBT									
Lane Configurations	**	1	***									
Traffic Volume (vph)	168	11	973									
Future Volume (vph)	168	11	973									
Lane Group Flow (vph)	177	12	1024									
Sign Control	Free		Free									
Intersection Summary												
Control Type: Unsignalized												

Intersection Capacity Utilization 23.2% Analysis Period (min) 15

ICU Level of Service A

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	-	7	1	+	1	1	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	A 1.			4	W.		
Traffic Volume (veh/h)	166	2	2	973	64	16	
Future Volume (Veh/h)	166	2	2	973	64	16	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	175	2	2	1024	67	17	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh)							
Upstream signal (m)	129			106			
pX, platoon unblocked					0.79		
vC, conflicting volume			177		1204	88	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			177		1126	88	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			100		57	98	
cM capacity (veh/h)			1396		157	952	
Direction, Lane #	EB 1	EB 2	WB 1	NB 1			
Volume Total	117	60	1026	84			
Volume Left	0	0	2	67			
Volume Bight	0	2	0	17			
cSH	1700	1700	1396	189			
Volume to Capacity	0.07	0.04	0.00	0.44			
Queue Length 95th (m)	0.0	0.0	0.0	16.6			
Control Delay (s)	0.0	0.0	0.0	38.5			
Lane LOS	0.0	0.0	A	55.5 F			
Approach Delay (s)	0.0		0.0	38.5			
Approach LOS	0.0		0.0	E			
Intersection Summary				_			
			2.5				
Average Delay			2.5			onico	C
			01.2%		J Level of S	ervice	U
Analysis Period (min)			15				

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F

Appendix F - TDM Supportive Development Design and Infrastructure Checklist





TDM-Supportive Development Design and Infrastructure Checklist:

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

Legend			
REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed		
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		

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	1.	WALKING & CYCLING: ROUTES	
	1.1	Building location & access points	•
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	×
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	1
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	
	1.2	Facilities for walking & cycling	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations (see Official Plan policy 4.3.3)	×
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible (see Official <i>Plan policy 4.3.12</i>)	

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see Official Plan policy 4.3.10)	
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see Official Plan policy 4.3.10)	
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on- road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see Official Plan policy 4.3.11)	
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	✓
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	
	1.3	Amenities for walking & cycling	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	

	TDM-s	upportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	2.	WALKING & CYCLING: END-OF-TRIP FACILI	TIES
	2.1	Bicycle parking	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see Official Plan policy 4.3.6)	√
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well- used areas (see Zoning By-law Section 111)	∡
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored <i>(see Zoning By-law Section 111)</i>	∡
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	
	2.2	Secure bicycle parking	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see Zoning By-law Section 111)	
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	
	2.3	Shower & change facilities	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	
	2.4	Bicycle repair station	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	3.	TRANSIT	
	3.1	Customer amenities	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	
	4.	RIDESHARING	
	4.1	Pick-up & drop-off facilities	•
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	
	4.2	Carpool parking	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	
	5.	CARSHARING & BIKESHARING	
	5.1	Carshare parking spaces	
BETTER	5.1.1	Provide carshare parking spaces in permitted non- residential zones, occupying either required or provided parking spaces (see Zoning By-law Section 94)	
	5.2	Bikeshare station location	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	

	TDM-s	supportive design & infrastructure measures: Non-residential developments	Check if completed & add descriptions, explanations or plan/drawing references
	6.	PARKING	
	6.1	Number of parking spaces	•
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	\checkmark
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (see Zoning By-law Section 104)	
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking <i>(see Zoning By-law Section 111)</i>	
	6.2	Separate long-term & short-term parking areas	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	
	7.	OTHER	
	7.1	On-site amenities to minimize off-site trips	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	

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	
	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	
	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: 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	
BASIC	3.1.2	Provide online links to OC Transpo and STO information	
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	
	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)	
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)	

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	
		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	

TDM Measures Checklist:

Residential Developments (multi-family, condominium or subdivision)

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: 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	
	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 & des	tinations
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances (multi-family, condominium)	
	2.2	Bicycle skills training	
BETTER	2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	

		TDM	measures: 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 (multi-family, condominium)	
BETTER		3.1.2	Provide real-time arrival information display at entrances (multi-family, condominium)	
		3.2	Transit fare incentives	
BASIC	*	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	
		3.3	Enhanced public transit service	
BETTER	*	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels <i>(subdivision)</i>	
		3.4	Private transit service	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	
		4.	CARSHARING & BIKESHARING	
		4.1	Bikeshare stations & memberships	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (<i>multi-family</i>)	
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized <i>(multi-family)</i>	
		4.2	Carshare vehicles & memberships	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	
		5.	PARKING	
		5.1	Priced parking	
BASIC	*	5.1.1	Unbundle parking cost from purchase price (condominium)	
BASIC	*	5.1.2	Unbundle parking cost from monthly rent (<i>multi-family</i>)	

Т	DM	measures: Residential developments	Check if proposed & add descriptions
6.	,	TDM MARKETING & COMMUNICATIONS	
6.′	1	Multimodal travel information	
BASIC ★ 6.1	1.1	Provide a multimodal travel option information package to new residents	
6.2	2	Personalized trip planning	
BETTER ★ 6.2	2.1	Offer personalized trip planning to new residents	



Appendix G - Truck Turning Templates







	ZONING INFORMATIO	N		At a second Contraction	Ericsson Canada 🔍
	NOTE: ALL ZONING DEFINITIONS AND REC	QUIREMENTS AS PER CITY OF OTTAWA	ZONING	Shell O The E	Barley Mow
YLINE	ZONING MECHANISM	REQUIRED	PROVIDED	Margan's Grant Well Burger King 🖗	or brockstreet
BACK	ADDRESS	3026 SOLANDT ROAD		steines Reality And In Nok	kia Q Solace Q
DING	DEFINITION			ot or .	
ΤΙΟ		45 m	OFFICE	nun cressen - Be - Augebo ed - Tange A - Tange - Augebo ed - Tange	roint Software Technologies
PED AREA	MIN. LOT AREA	4000 m ²	±17116 m ²	tanta a	the second
RANCE	MIN. FRONT / CORNER SIDE	12 m	12 m	Ciena Corporation Q	
ENCLOSURE		7.5 m	> 7.5 m	ça V Innovation Park & Ride	100 Solandt Road
	MIN REAR YARD SETBACK	7.5 m	>7.5 m	Cisco 오	Phreesia
D PARKING SPACE	MAX LOT COVERAGE	45 %	+11 %	Richcraft Recreation O complex - Kanata	TPC4
PARKING SPACE		22 m	+ 19.0 m	L M	POTA
TARFA	MIN. WIDTH OF LANDSCAPING	3 m ABUTTING A STREET	3 m	vo do como f	Tim Hortons 💡
T CROSS WALK	STANDARD PARKING SPACE	2.6m x 5.2m	68 %	oreal Roug	
RESSED CURB	REDUCED PARKING SPACE	2.4m x 5.2m (MAX. 50 %)	32 %		STATION Google
DSCAPE	ACCESSIBLE PARKING SPACE	3.4m x 5.2m TYPE A 2.4m x 5.2m TYPE B	3.4m x 5.2m 2.4m x 5.2m		
3	PARKING REQUIREMENTS	198	350		
FIRE HYDRANT	AREA C: SUBURBAN	2.4 / 100 m ² G.F.A (BY-LAW)	948KING RATE: 3.50 / 1000 s.f		
HYDRANT	BARRIER-FREE PARKING	9	9 (5 x TYPE A) 9 (4 x TYPE B)	SIGNAGE LI	EGEND:
CONNECTION	LOADING SPACES	1 (3.5m x 7.0m)	1 (3.5m x 7.0m)	FR FIR	EROUTE
IREES TO REMAIN	BICYCLE PARKING RATE	33 (1 / 250 m² of G.F.A.)	33	BF BF	PARKING
	BUILDING AREA		±1910 m² (20,560 s.f)		OP OFF ONLY/NO PARKING
, SEE LANDSCAPE	GROSS FLOOR AREA (BY-LAW)		±8230 m² (88,590 s.f)		IE WAY
CTILE WALKING	GROSS FLOOR AREA (INSIDE EXT. WALL)		9296 m² (100,000 s.f)		
INDICATORS					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	33 19-8" 19-8" 10-00] 17'-1" 15.20] 5		SPACE: 421		
25 SETBACK		±64'-8" [19.71]			
	∿⊷€ <mark>BD</mark> ∜⊷ee	^{F(p-40.00}			30 METRES







N45 ARCHITECTURE INC.

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 tel. 613.224.0095
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project

SOLANDT ROAD OFFICE BULDING

3026 SOLANDT ROAD, KANATA, ONTARIO



ARCHITECTS Z
ROBERT C. MATTHEWS
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date Dec. 2019	checked by R.M	
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	ZONING INFORMATIO	N		11 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Bor Generation Canada 👽	
	NOTE: ALL ZONING DEFINITIONS AND REC	UIREMENTS AS PER CITY OF OTTAWA	ZONING	State Shell O	The Barley Mow	
YLINE	ZONING MECHANISM	REQUIRED	PROVIDED	Morgan's grant wat Burger King 👰	ery for Dr	
BACK	ADDRESS	3026 SOLANDT ROAD		time and	Nokia 🛛 Solace 🛇	Huawe & De
DING	DEFINITION	IG 6 GENERAL INDUSTRIAL ZONE	OFFICE	eot Ot	Las fame	
ΤΙΟ	MIN.LOT WIDTH	45 m		and constant and Alendry to the stand	heck Point Software Technologies	
PED AREA	MIN. LOT AREA	4000 m ²	±17116 m ²		the area	-
RANCE	MIN. FRONT / CORNER SIDE	12 m	12 m	Clena Corporation Q	- SITE	QNX Software Systems Limit
ENCLOSURE	MIN INT SIDE YARD SETBACK	7.5 m	> 7.5 m	ço* ♥ Innovation Park & Ride		1026 Solandt Road
	MIN. REAR YARD SETBACK	7.5 m	> 7.5 m	Cisco 🔍	Phreesia O	\sum
D PARKING SPACE ? m	MAX. LOT COVERAGE	45 %	±11 %	Richcraft Recreation Ocomplex - Kanata	AC.	14
PARKING SPACE	MAX. BUILDING HEIGHT	22 m	± 19.0 m	- LA -		NON AS
TAREA	MIN. WIDTH OF LANDSCAPING	3 m ABUTTING A STREET	3 m	subcomi la		Tim Hortons 🤤
T CROSS WALK	STANDARD PARKING SPACE	2.6m x 5.2m	68 %	Set Proved	SOUTH MARCH	
RESSED CURB	REDUCED PARKING SPACE	2.4m x 5.2m (MAX. 50 %)	32 %		STATION Go	ogle
DSCAPE	ACCESSIBLE PARKING SPACE	3.4m x 5.2m TYPE A 2.4m x 5.2m TYPE B	3.4m x 5.2m 2.4m x 5.2m			
	PARKING REQUIREMENTS	198	350 PARKING RATE:			
-IKE HYDKANI		2.4 / 100 m² G.F.A(BY-LAW)	3.50 / 1000 s.f	SIGNAGI		
HYDRANT	BARRIER-FREE PARKING	9	9 (5 x TYPE A) (4 x TYPE B)	SIGNAG	- LEGEND.	
CONNECTION	LOADING SPACES	1 (3.5m x 7.0m)	1 (3.5m x 7.0m)	FR	FIRE ROUTE	
TREES TO REMAIN	BICYCLE PARKING RATE	33 (1 / 250 m² of G.F.A.)	33	BF	BF PARKING	
	BUILDING AREA		±1910 m² (20,560 s.f)	D	DROP OFF ONLY/NO PARKI	NG
, SEE LANDSCAPE	GROSS FLOOR AREA (BY-LAW)		±8230 m² (88,590 s.f)	\rightarrow	ONE WAY	
	GROSS FLOOR AREA (INSIDE EXT. WALL)		9296 m² (100,000 s.f)			
INDICATORS						
Image: Solution of the second seco	37 37 37 33 19-8" 6001 17-1" 15.20] 5.20] 5.20] 5.20] 5.20] 6001 17-1" 17-1" 26 MOUNTABLE CONCRETE 100 117-1" 120 17-1" 17-1" 17-1" 17-1" 19 10 10 10 10		SPACE: 421			
		±64'-8" [19.71]			20 30 METRES	
						N Sol







N45 ARCHITECTURE INC.

 71 Bank Street, 7th Floor - Ottawa, Ontario, K1P 5N2

 tel. 613.224.0095
 fax 613.224.9811

project

SOLANDT ROAD OFFICE BULDING

3026 SOLANDT ROAD, KANATA, ONTARIO



ARCHITECTS Z
ROBERT C. MATTHEWS
²⁴ / _{10/10/10} /10/10/10/10/10/10/10/10/10/10/10/10/10/

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date Dec. 2019	checked by R.M	
project number	drawing number	
19-458	A-001	
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DO NOT SCALE DRAWII		



Appendix H - Segment MMLOS





SEGMENTS		105	Terry Fox	Solandt	March
		Solandt Carling			Legget
	Sidewalk Width Boulevard Width		≥ 2 m < 0.5	≥ 2 m < 0.5	1.8 m < 0.5 m
	Avg Daily Curb Lane Traffic Volume		> 3000	> 3000	≤ 3000
rian	Operating Speed On-Street Parking		> 60 km/h no	> 60 km/h no	> 50 to 60 km/h no
st	Exposure to Traffic PLoS	F	F	F	С
pé	Effective Sidewalk Width		2.0 m	2.0 m	2.0 m
Pe	Pedestrian Volume		250 ped/hr	250 ped/hr	250 ped/hr
	Crowding PLoS		В	В	В
	Level of Service		F	F	С
	Type of Cycling Facility		Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic
	Number of Travel Lanes		≥ 3 each direction	≥ 3 each direction	2-3 lanes total
	Operating Speed		> 70 km/h	> 70 km/h	>40 to <50 km/h
e	# of Lanes & Operating Speed LoS		E	E	D
	Bike Lane (+ Parking Lane) Width		≥ 1.8 m	≥ 1.8 m	
کر د	Bike Lane Width LoS	E	А	A	-
Bic	Bike Lane Blockages		Rare	Rare	
	Blockage LoS		A	A	-
	Median Refuge Width (no median = < 1.8 m)		< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes	≤ 3 lanes	≤ 3 lanes
	Sidestreet Operating Speed		≤ 40 km/h	≤ 40 km/h	≤ 40 km/h
	Unsignalized Crossing - Lowest Los		A	A	A
	Level of Service		E	E	D
sit	Facility Type		Mixed Traffic	Mixed Traffic	Mixed Traffic
ans	Friction or Ratio Transit:Posted Speed	D	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8
μ	Level of Service		D	D	D
	Truck Lane Width		≤ 3.5 m	≤ 3.5 m	≤ 3.5 m
ICK	Travel Lanes per Direction	C	> 1	> 1	1
Tru	Level of Service		Α	Α	С

Appendix I - Collision Analysis





Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	12	103	15	25	0	22	3	180	85%
02 - Non-fatal inju	0	3	16	3	7	0	2	1	32	15%
01 - Fatal injury	0	0	0	0	0	0	0	1	1	0%
Total	0	1 5	119	18	32	0	24	5	213	100%
	#7 or 0%	#5 or 7%	#1 or 56%	#4 or 8%	#2 or 15%	#7 or 0%	#3 or 11%	#6 or 2%		•

MARCH RD/SOLANDT RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	56	42,167	1825	0.73

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	4	23	3	16	0	2	0	48	86%
02 - Non-fatal inju	0	0	3	1	4	0	0	0	8	14%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	4	26	4	20	0	2	0	56	100%
	0%	7%	46%	7%	36%	0%	4%	0%		-

MARCH RD btwn TERRY FOX DR & SOLANDT RD/

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Sgement Length in km	Collisions/MKT
2014-2018	16	13,700	1825	0.919	0.70

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	0	4	2	0	0	4	0	10	63%
02 - Non-fatal inji	0	2	1	1	0	0	2	0	6	38%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	2	5	3	0	0	6	0	16	100%
	0%	13%	31%	19%	0%	0%	38%	0%		

MARCH RD/TERRY FOX DR

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	59	40,719	1825	0.79

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	2	31	4	1	0	5	2	45	76%
02 - Non-fatal inju	0	1	9	1	3	0	0	0	14	24%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	3	40	5	4	0	5	2	59	100%
	0%	5%	68%	8%	7%	0%	8%	3%		

CARLING AVE/STATION RD/MARCH RD

Years	lotal # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	52	41,502	1825	0.69

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	5	31	3	4	0	5	1	49	94%
02 - Non-fatal inji	0	0	2	0	0	0	0	0	2	4%
01 - Fatal injury	0	0	0	0	0	0	0	1	1	2%
Total	0	5	33	3	4	0	5	2	52	100%
	0%	10%	63%	6%	8%	0%	10%	4%		

MARCH RD btwn SOLANDT RD & STATION RD/

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Sgement Length in km	Collisions/MKT
2014-2018	25	18,943	1825	0.625	1.16

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	0	12	3	3	0	5	0	23	92%
02 - Non-fatal inju	0	0	1	0	0	0	0	1	2	8%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	0	13	3	3	0	5	1	25	100%
	0%	0%	52%	12%	12%	0%	20%	4%	•	•

LEGGET DR/SOLANDT RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	4	13,341	1825	0.16

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	1	2	0	0	0	1	0	4	100%

02 - Non-fatal inji	0	0	0	0	0	0	0	0	0	0%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	1	2	0	0	0	1	0	4	100%
	0%	25%	50%	0%	0%	0%	25%	0%		

SOLANDT RD btwn MARCH RD & LEGGET DR/

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Sgement Length in km	Collisions/MKT	
2014-2018	1	3,169	1825	0.24	0.72	

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total	
03 - P.D. only	0	0	0	0	1	0	0	0	1	100%
02 - Non-fatal inju	0	0	0	0	0	0	0	0	0	0%
01 - Fatal injury	0	0	0	0	0	0	0	0	0	0%
Total	0	0	0	0	1	0	0	0	1	100%
	0%	0%	0%	0%	100%	0%	0%	0%		-



Appendix J - Transit Map









INNOVATION BRIARBROOK TUNNEY'S PASTURE GATINEAU

7 days a week / 7 jours par semaine

All day service Service toute la journée









MORGAN'S GRANT INNOVATION TUNNEY'S PASTURE



Monday to Friday / Lundi au vendredi

All day service Service toute la journée





Future route after O-Train Line 1 is open Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... 613-563-4011 Security / Sécurité 613-741-2478

C Transpo



KANATA TUNNEY'S PASTURE GATINEAU

Local

Monday to Friday / Lundi au vendredi

Peak periods only Périodes de pointe seulement



2019.07



Future route after O-Train Line 1 is open Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... 613-563-4011 Security / Sécurité 613-741-2478

C Transpo





INNOVATION EAGLESON

Monday to Friday/ Lundi au vendredi Limited service / Service limité



2019.06

plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

Customer Service Service à la clientèle	613-741-4390
Lost and Found / Objets perdus	613-563-4011
Security / Sécurité	613-741-2478

Effective December 25, 2016 En vigueur 25 décembre 2016

CC Transpo





MAXWELL BRIDGE TUNNEY'S PASTURE

Monday to Friday / Lundi au vendredi

Peak periods only Périodes de pointe seulement





Transitway & Station

- Limited stops: Off only in AM / No stop in PM Arrêts limités : Débarquement en AM seul. / Aucun arrêt en PM
- 0
- AM: Off only PM: Full Service AM: Débarquement seul. - PM: Service complet
- Park & Ride / Parc-o-bus

2019.09



Future route after O-Train Line 1 is open Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... 613-563-4011 Security / Sécurité 613-741-2478









Appendix K - Transit Ridership Data





		_	АМ				РМ		24-HR			
Stop Number	Location	Route and direction	Boarding s	Alighting s	Average Load at Departure	Boarding s	Alighting s	Average Load at Departure	Boarding s	Alighting s	Average Load at Departure	
1172	Solandt N March ES	64 IN	0	16	5	5	8	21	5	30	9	
1172	Solandlin March FS	66 WB	0	0	0	NA	NA	NA	0	0	0	
1894	March W Solandt FS	63 OB	4	2	22	NA	NA	NA	15	5	12	
		64 OB	0	3	24	1	0	7	10	3	13	
		660 IN	0	1	26	NA	NA	NA	0	1	26	
		674 WB	0	0	28	NA	NA	NA	0	0	28	
	March E Solandt FS	63 IN	NA	NA	NA	0	4	24	0	4	22	
1898		660 OB*	NA	NA	NA	0	0	12	0	0	12	
		674 EB	NA	NA	NA	NA	NA	NA	0	0	37	
7087	Legget W Solandt FS	63 OB	NA	NA	NA	24	0	13	29	0	10	
1901		64 OB	NA	NA	NA	33	0	14	31	0	10	
7991	Legget E Solandt NS	63 IN	0	19	8	0	0	6	0	31	7	
		64 IN	0	24	7	NA	NA	NA	0	42	5	
* Data from April 2019 due to lack of samples in January 2019												

Appendix L - Intersection MMLOS





	INTERSECTIONS		March Rd /	Terrv Fox Dr		March Rd / Solandt Rd				Solandt Rd / Legget Dr				March Rd / Carling Ave			
	Crossing Side	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
	Lanes	10+	10+	10+	10+	10+	10+	9	9	7	7	6	6	10+	10+	10+	8
	Median	Median > 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
	Conflicting Left Turns	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive	Protected	Protected
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RToR) ?	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
an	Right Turn Channel	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	Conventional with Receiving Lane	No Channel
stri	Corner Radius	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m
edes	Crosswalk Type	Std transverse	Std transverse	Std transverse	Std transverse markings	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse	Std transverse
<u>م</u>	PETSI Score	-28	-38	-38	-38	-38	-38	-22	-22	3	3	19	19	-46	-46	-38	-6
	Ped. Exposure to Traffic LoS	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	F	F	F	F	#N/A	#N/A	#N/A	F
	Cycle Length	42	42	47	47	32	32	46	85	46	46	66	66	40	40	68	68
	Effective Walk Time	7	7	21	21	8	8	28	67	28	28	48	48	7	7	44	44
	Average Pedestrian Delay	15	15	7	7	9	9	4	2	4	4	2	2	14	14	4	4
	Pedestrian Delay LoS	В	В	Α	А	Α	Α	Α	Α	Α	Α	Α	Α	В	В	Α	Α
		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	F	F	F	F	#N/A	#N/A	#N/A	F
	Level of Service	#N/A				#N/A				F				#N/A			
	Approach From	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
	Bicycle Lane Arrangement on Approach	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic					
	Right Turn Lane Configuration	> 50 m Introduced right turn lane	> 50 m Introduced right turn lane	> 50 m	> 50 m Introduced right turn lane	≤ 50 m Introduced right turn lane	> 50 m Introduced right turn lane	> 50 m	≤ 50 m Introduced right turn lane	> 50 m Introduced right turn lane	≤ 50 m Introduced right turn lane	≤ 50 m					
	Right Turning Speed	>25 to 30 km/h	>25 to 30 km/h	>25 km/h	>25 to 30 km/h	>25 to 30 km/h	>25 to 30 km/h	>25 km/h	>25 km/h	>25 km/h	>25 km/h	>25 km/h	>25 km/h	>25 to 30 km/h	>25 to 30 km/h	>25 to 30 km/h	≤ 25 km/h
0	Cyclist relative to RT motorists	D	D	F	D	С	D	F	E	E	Е	E	E	с	D	С	D
	Separated or Mixed Traffic	Separated	Separated	Mixed Traffic	Separated	Separated	Separated	Mixed Traffic	Separated	Separated	Separated	Mixed Traffic					
Bicy	Left Turn Approach	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	≥ 2 lanes crossed	One lane crossed					
	Operating Speed	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h
	Left Turning Cyclist	F	F	F	F	F	F	E	E	E	E	E	E	F	F	F	F
		F	F	F	F	F	F	F	E	E	E	E	E	F	F	F	F
	Level of Service		F		F			E			F						
Ĭ	Average Signal Delay	0 sec	> 40 sec	≤ 10 sec	≤ 40 sec	> 40 sec	> 40 sec	> 40 sec	> 40 sec	≤ 30 sec	≤ 20 sec	≤ 20 sec	≤ 10 sec	> 40 sec	≤ 30 sec	> 40 sec	0 sec
nsi		Α	F	В	E	F	F	F	F	D	С	С	В	F	D	F	Α
Tra	Level of Service			=		F			D					F			
	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m
ruck	Number of Receiving Lanes on Departure from Intersection	≥2	≥2	≥2	≥2	≥2	≥2	≥2	≥2	1	1	1	1	1	≥2	≥2	≥2
		Α	Α	Α	Α	Α	Α	Α	Α	С	С	С	С	С	Α	Α	Α
	Level of Service			A				A				C				С	
-	Volume to Capacity Ratio		0.61	- 0.70			0.91	- 1.00		0.71 - 0.80				0.91-1.00			
uto			0.01				0.01	-			0.71			0.91-1.00			
¥	Level of Service			2				-				•				-	