Town of Aurora Master Transportation Study

FINAL REPORT

Town of Aurora
December 2, 2020

Executive Summary

The Town of Aurora has initiated a Master Transportation Study (MTS) to review and address existing transportation needs within the Town, as well as provide support for the growth of the Town to 2041, through long-term infrastructure planning and policy solutions. This study builds upon the Town's 2013 Master Transportation Operations Study Update, which took a multi-modal approach to identifying road network improvements and active transportation connections to meet future traffic demands.

As the population, employment, and economic activity within the Town continues to increase, there is an opportunity to consider the new mobility challenges and rising parking demand in conjunction with the development of local and regional initiatives such as The Aurora Promenade Concept Plan and the Barrie Rail Corridor Expansion (BRCE). The MTS seeks to develop an integrated set of road network and infrastructure solutions that continue to accommodate vehicles, cyclists, pedestrians, and transit users, while streamlining the improvements to preserve the small-town community characteristics of the Town, and particularly, the Town's historic downtown core. The MTS also seeks to encourage alternative mobility options and provide more accessible, convenient, and direct connections to Major Transit Stations and public transit.

This report documents the findings and recommendations from several inter-related studies including a Future Conditions Assessment, Traffic Operations and Safety Review, Traffic Infiltration Assessment, Parking Needs Assessment, and a Sidewalk Priority Plan.

The key findings and recommendations of each of these analyses is summarized in the following sections.

Future Conditions

The Town of Aurora is planned to grow from approximately 63,000 persons and 29,000 jobs today to approximately 79,000 persons and 38,000 jobs by 2041. With consideration for planned Regional infrastructure improvements, an assessment of 2041 conditions was completed to understand the need for further action and investment by the Town to plan for growth.

Four Alternative Solutions were identified:

1. Do Nothing
2. Travel Demand Management (TDM), Transit and Active Transportation Improvements
3. Operational Improvements
4. Road Widenings

Based on the analysis presented, Alternatives 1 and 4 were screened out while Alternative 2 and 3 were recommended to be carried forward.

It is thus recommended that the Town's transportation strategy to accommodate growth to the year 2041 focus on managing the existing network while improving connectivity and safety particularly for pedestrians and cyclists. This includes focus on travel demand management (TDM), supporting and encouraging transit use, and active transportation improvements including completing the sidewalk network and implementing the recommendations of the 2011 Trails Master Plan. To keep vehicular traffic moving efficiently, operational improvements are recommended such as traffic signal timing adjustments, travel lane modifications, safety improvements, and parking management.

It is noted that after accounting for planned Regional improvements, no major vehicular capacity improvements, such as lane widenings, are required by 2041.

Traffic Operations and Safety

Traffic Signal Progression Analysis

Following the optimization process, improvements were minor in nature. It appears that the corridor has already been coordinated, and this existing conditions analysis confirms that the implemented improvements continue to be operating well.

Safety Review

A desktop review of the top five intersections for most collisions spans Yonge Street from Orchard Heights Boulevard/Batson Drive to Murray Drive/Edward Street. Based on the collision analysis it was noted that the most frequent collisions that occurred were turning movement and rear-end. These accidents could be attributed to the fact that most of the road segment along Yonge Street (Aurora Heights Drive/Mark Street to Golf Links Drive/Dunning Avenue) consists of two travel lanes in each direction with no dedicated left turn or right turn lanes. This, coupled with the number of private driveways along Yonge Street is problematic because drivers may suddenly slow down to turn, while other drivers may be following too closely, or being distracted.

Exclusive left-turn lanes for driveway access and opposing left-turn lanes at intersections would benefit both traffic operations and safety. However, the constrained right-of-way along Yonge Street through the Aurora Promenade area would not be able to accommodate a fifth lane without significant property acquisition to increase available right-of-way. As such, making these improvements would require a "road diet" reducing the number of through travel lanes from four to two.

Yonge Street Road Diet

A road diet is a technique used in transportation planning whereby the number of travel lanes on the road is reduced. A potential road diet of Yonge Street from south of

Orchard Heights Boulevard/Batson Drive to Golf Links Drive/Dunning Avenue is recommended for further study. Based on the analysis in this document, a road diet would have benefits to safety and operations at Yonge-Wellington and at other intersections along the corridor. Following the completion of the Master Transportation Study, it is recommended that the Town conduct further public consultation and detailed study in coordination with York Region to better understand the impacts on the community as well as on the planned transit services along Yonge Street.

Traffic Diversion Analysis

The following Town streets identified as commuter routes[1] through a traffic diversion analysis should be considered for enhanced safety measures to minimize speeds and prioritize safety for all road users:

- Aurora Heights Drive from Bathurst Street to Yonge Street
- Mark Street, Walton Drive
- Maple Street
- Catherine Avenue
- Centre Street

As these routes are in the vicinity of the Yonge-Wellington intersection, improvements at that location may also mitigate speeding along these commuter diversion routes.

Finally, while it is noted that traffic diversion has occurred on Elderberry Trail from April 2017 to March 2018, the causes are not apparent. It is recommended that the Town continue to monitor the situation to determine whether the issue is due to one-time incidents or if there is a broader contextual issue which is not apparent through this analysis.

Parking Needs

A parking utilization study was conducted to provide direction on short-term and long-term needs for parking particularly in the Downtown and surrounding the GO Station.

Short-term Recommendations

GO Station Parking Demand: The Aurora GO Station should be monitored closely to ensure that there is no overflow during its actual peak hours on busy weekdays. If there is a consistent lack of supply to address high parking demand at the GO Station parking lots, temporary parking solutions should be provided to minimize conflict with neighbouring business owners and residents, including formalizing usage of the Town Park parking spaces, the Sheppard’s Bush Parking Lot on Industry Street, and the

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[1] A road or transit line that is periodically used to travel between one’s place of residence and place of work

Sheppard's Bush Soccer Field. Supplemental works would be required to provide sidewalks and/or lighting to improve safety between the GO station and these potential overflow parking lots.

<u>On-Street Parking on Yonge Street</u>: If the traffic demand along Yonge Street from Wellington Street to Church Street increases, the on-street parking along this segment should be strictly enforced to maximize safety and reduce congestion. On-street parking along a high demand corridor will increase.

Long-term Needs and Recommendations

<u>Consolidate private lots in the Downtown</u>: Consolidation of private lots into municipally owned and managed lots promotes efficiency in land use, creates land for new development, and results in increased pedestrian activity in the area. This change could be considered alongside potential changes to on-street parking along Yonge Street through a potential Road Diet.

<u>215 Industrial Parkway South</u>: This is a property owned by the Town of Aurora and is currently leased as the headquarters for the Queen's York Rangers Army Cadet Corps. Although this property is located outside of the study limits, there is a possibility of this property being served as an additional parking lot in the future, if necessary. Given its distance from high demand locations in the Town, this site is likely best utilized or considered as an off-site parking location for autonomous vehicles. While policy and legislation regarding these vehicles remains to be determined, it is recognized that the Town should proactively protect lands for this type of use which may effectively reduce parking needs within its growth and intensification areas.

<u>Implement on-street parking policies</u>: Consideration for on-street parking policies should be developed through further study to prevent GO commuters from parking on quiet residential streets, including clear signage and information on where the appropriate over-flow parking is located.

<u>Implement permitting for on-street parking</u>: provide residents the opportunity to apply for on-street parking permits for accessible users. Further study is required to determine an appropriate solution to site-specific needs.

Sidewalk Priority Plan

A gap analysis was conducted to identify and prioritize the construction of new sidewalks in the Town. Based on the Sidewalk Gap Map and Aurora's 10-year Road Reconstruction Map, it is recommended that sidewalks along Industrial Parkway South (Yonge Street to Engelhard Drive) be constructed in 2020/2021 along with the planned road reconstruction in order to save on costs.

Based on the evaluation, ten streets have been identified as having high priority for sidewalk installation and should be considered to be included in the 1-5 year plan. The medium to low priority sidewalk installation should be considered to be included in the 5-10 year plan. The revised plan for sidewalk construction is provided in **Table ES-1**.

Table ES-1: Revised Sidewalk Construction Plan

STREET NAME	REVISED PROPOSED YEAR OF CONSTRUCTION						
	2020	HIGH	2024	MEDIUM	2026	LOW	Sidewalk Construction Not Approved by Council
Adair Drive							*
Bailey Crescent							*
Baldwin Road							*
Bathurst Street						✓	
Bayview Avenue						✓	
Berczy Street				✓			
Collins Crescent		✓					
Corbett Crescent		✓					
Davidson Road							*
Duncton Wood Crescent						✓	
Harriman Road							*
Henderson Drive							*
Hillview Road						✓	
Holman Crescent							*
Hutchinson Road		✓					
Industrial Parkway North			✓				
Industrial Parkway South (Yonge St. – Engelhard Dr.)	✓						
Industry Street			✓				
Johnson Road							*
Kitimat Crescent	✓						
Knowles Crescent		✓					
Limeridge Street		✓					
Morning Crescent		✓					
Patrick Drive		✓					
St. John's Sideroad West						✓	
Stoddart Drive		✓					
Webster Drive		✓					
Wellington Street West						✓	
Woodland Hills Boulevard					✓		
Yonge Street				✓			

✓ Current proposed construction
✓ Revised from current proposed construction
✓ **High Priority**
✓ Medium Priority
✓ Low Priority
* Construction Not Approved by Council

Cycling Facilities

A study was conducted to identify opportunities for new on-street cycling facilities with a focus on appropriately designating space for cyclists between existing curbs, which can be implemented in a cost-effective manner. Recommendations build on the Town’s existing and planned cycling network and are supported by a best practices review of design guidelines including travel and parking lane widths and considerations at intersections.

Based on existing pavement width, road type, and vehicle speed and volumes on the road, **Figure ES-1** builds on the existing cycling network in the Town of Aurora and illustrates the recommended cycling facilities.

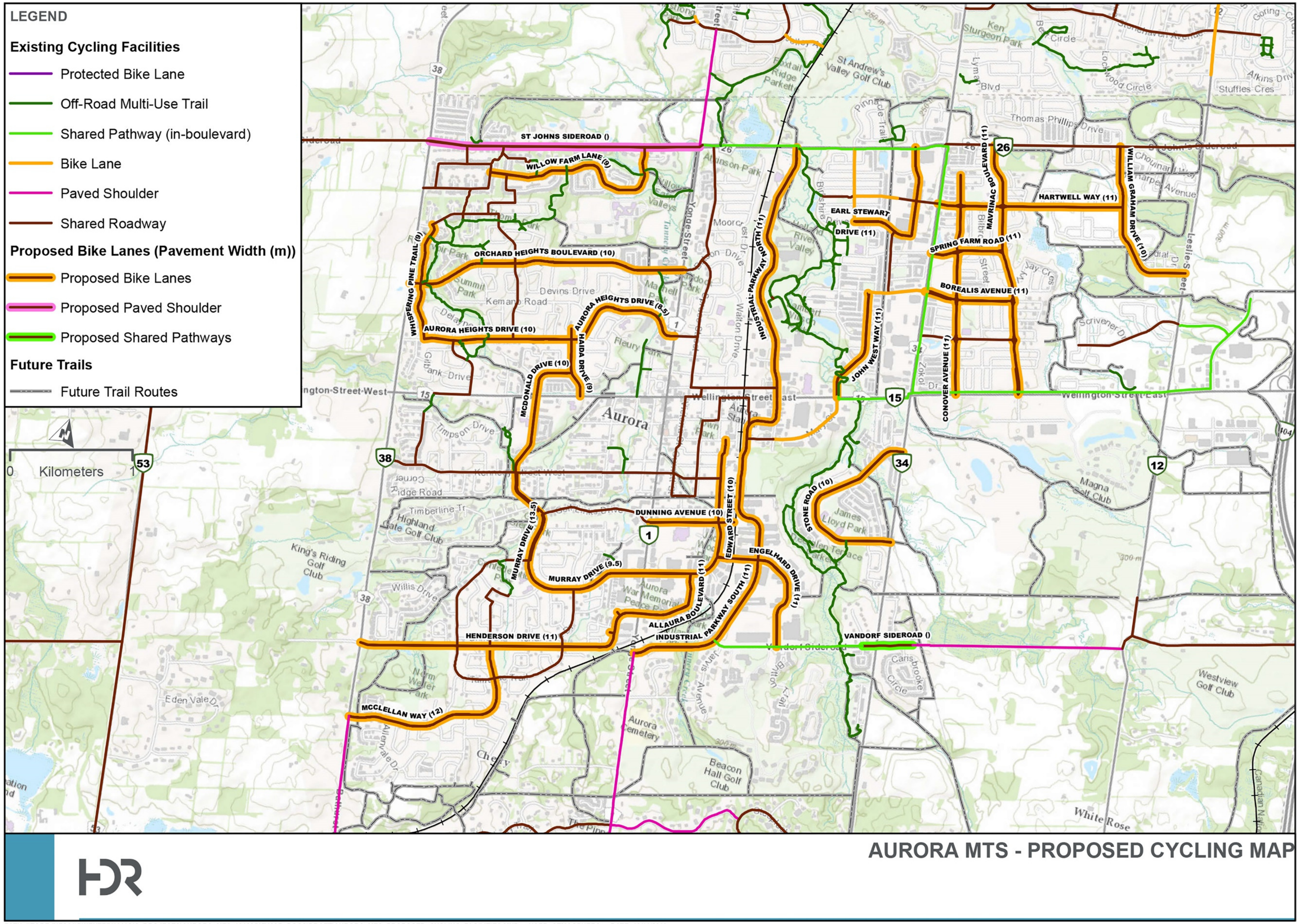

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Figure ES-1: Recommended Cycling Facilities

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1 Introduction

The Town of Aurora (the Town) has initiated a Master Transportation Study (MTS) to review and address existing transportation needs within the Town, as well as provide support for the growth of the Town to 2041, through long-term infrastructure planning and policy solutions. This study builds upon the Town's 2013 Master Transportation Operations Study Update, which took a multi-modal approach to identifying road network improvements and active transportation connections to meet future traffic demands.

As the population, employment, and economic activity within the Town continues to increase, there is an opportunity to consider the new mobility challenges and rising parking demand in conjunction with the development of local and regional initiatives such as The Aurora Promenade Concept Plan and the Barrie Rail Corridor Expansion (BRCE). The MTS seeks to develop an integrated set of road network and infrastructure solutions that continue to accommodate all road users including motorists, cyclists, pedestrians, and transit users, while streamlining the improvements to preserve the small-town community characteristics of the Town, and particularly, the Town's historic downtown core.

This report documents the findings and recommendations from several inter-related studies completed to assess the Town's short-term and long-term transportation needs. These studies are organized into eight chapters and address the following topics:

- Chapter 2: Background Review and Planning Context
- Chapter 3: Future Conditions Assessment
- Chapter 4: Traffic Operations and safety Review
- Chapter 5: Yonge Street Road Diet Analysis
- Chapter 6: Traffic Infiltration Assessment
- Chapter 7: Parking Needs Assessment
- Chapter 8: Sidewalk Priority Plan
- Chapter 9: Cycling Facilities

2 Background Review and Planning Context

2.1 Provincial Planning Context

2.1.1 Provincial Policy Statement 2014

The Provincial Policy Statement provides direction on land use planning and development, and the transportation system. Relevant land use and transportation policies to the development of the Town's Master Transportation Study include:

- **1.6.7.1** Safe, energy efficient, transportation systems that move people and goods and address projected needs
- **1.6.7.2** Use of travel demand management (TDM) strategies to maximize efficiency
- **1.6.7.3** A multimodal transportation system that provides connections within and among transportation systems and modes including across jurisdictional boundaries
- **1.6.7.4** Land use patterns that minimize length and number of vehicle trips to support transit and active transportation
- **1.6.7.5** Integrate transportation and land use considerations at all stages of planning
- **1.6.8.2** Protect for major goods movement facilities and corridors
- **1.6.8.3** New development should be compatible with the long-term purposes of the corridor

2.1.2 Provincial Growth Plan 2019

The Growth Plan for the GGH was released on June 16, 2006, and is a long-term plan that aims to:

- Revitalize downtowns
- Create complete communities
- Provide housing options to meet the needs of people at any age
- Curb urban sprawl and protect farmland and green spaces
- Reduce traffic gridlock by improving access to a greater range of transportation options

The June 2013 amendment extended the growth planning horizon to 2041 while the 2016 update identified new intensification targets. Subsequent updates in 2017 and 2019 provided further direction on intensification and direction to the municipal comprehensive review process as well as protection for employment zones.

The Growth Plan (2019) sets out a broad vision for transportation within the Greater Golden Horseshoe. It includes policies to improve integration between transportation and land use planning decisions across the region, including:

- identifying Priority Transit Corridors and requiring municipalities to plan for minimum density targets around Major Transit Station Areas in these corridors, and to prioritize planning for those areas including zoning that implements Growth Plan policies;
- requiring the adoption of a complete streets approach when designing, refurbishing or reconstructing existing or planned streets and street networks, and highlighting the importance of active transportation, particularly for transit;
- directing municipalities to work with transit service operators, the Province, Metrolinx where applicable and each other to support transit service integration within and across municipal boundaries;
- promoting joint development and alternative municipal development standards, such as reduced parking standards, in order to achieve transit supportive densities; and,
- requiring municipalities to develop and implement TDM policies in official plans and other planning documents.

2.1.3 Barrie Rail Corridor Expansion

The Barrie Rail Corridor Expansion (BRCE) project seeks to improve service on the Barrie GO line as described earlier and includes construction of a second track, improvements to existing facilities, and a new layover facility. Improvements to the existing facilities include upgrading Aurora GO station along with other GO stations on the corridor and upgrading existing structures such as bridges and culverts.

Ridership forecasts provided by Metrolinx indicate that under “opening day” conditions with the GO expansion service, the number of passengers boarding the morning peak hour will more than triple from 1,111 boardings in 2015 to 3,017 boardings in 2025. The expansion project has received notice to proceed in 2017 in accordance with the Transit Project Assessment Process (TPAP).

As outlined in the BRCE Environmental Project Report (EPR) for the TPAP, Phase One of the project will be implemented over the next 10 years and will include detailed design and construction of a second track between the City of Toronto and the Aurora GO station as well as upgrades to the Aurora GO station.

Within the Town of Aurora, the rail corridor crosses five streets at-grade or on a bridge:

The Yonge Street rail bridge between Industrial Parkway South and Henderson Drive can currently accommodate only one track. The GO expansion will require a second bridge span for the proposed second track and allowance for a future third track.

The Wellington Street at-grade level crossing is considered a potential priority location among the level crossings which are candidates for grade separation along the Barrie line. However, it is subject to further assessment in a separate Environmental Assessment study.

The existing at-grade level crossing at St. John's Sideroad has been shown to warrant grade separation or signal pre-emption immediately due to vehicular queues extending to Industrial Parkway in the existing peak hour conditions.

The existing at-grade level crossing at Engelhard Drive, located in an industrial area in the southern part of the Town of Aurora is shown to warrant grade separation by 2021 as a result of the expected increase in rail and vehicular interaction at the crossing.

The existing at-grade level crossing at Centre Street is located outside the limits of Phase One of the Barrie GO expansion and was shown not to warrant grade separation until 2025.

There are also three proposed grade separated trail crossings which are subject to further study for grade separation: Bathurst Street, Engelhard Drive, and Cousins Drive.

The existing Aurora GO station currently features an accessible platform, station building, Kiss & Ride, bus loop, surface parking, and a parking garage accommodating over 1,400 vehicles. The expansion efforts include a new west island platform to serve the new second track and a proposed pocket track, resulting in reduced surface parking on the west side of the rail corridor. The parking needs for GO stations has been assessed in a separate system-wide parking study discussed in the next section.

As part of the EPR, a review of the future traffic operations in the areas surrounding the existing Aurora GO station indicated capacity constraints at intersections which serve as accesses to the station, including at Wellington Street & Berczy Street, Wellington Street & Ross Street (GO access), and Wellington Street & Industrial Parkway North/South. Considering that a high auto modal-split remains in place for the traffic expected to access the Aurora GO station in the future, the following mitigation measures as outlined in **Table 2-1** were assessed in the EPR to bring traffic operations to acceptable levels.

The Town of Aurora will need to work with its Regional and Provincial partners to ensure that the existing transportation systems are improved to plan, fund, and build the connections needed to get people to places, especially existing and planned transit stations. Further work is needed to plan for the 'first and last mile'. The "first and last mile" connection refers to the beginning or end of a trip made generally by public transportation and that people will usually walk or cycle to transit if it is close enough (Regional Municipality of York Background Report – Pedestrian & Cycling Development Plan).

Table 2-1: Proposed Intersection Improvements (BRCE EPR)

Intersection	2021	2025
Industrial Parkway/GO South Access*	Install semi-actuated traffic signal Add dedicated eastbound left turn lane** Add dedicated westbound right turn lane**	
Wellington Street/Ross Street	Install semi-actuated traffic signal Add dedicated eastbound right turn lane** Add dedicated northbound left- and right turn lanes**	
Wellington Street/Industrial Parkway	Add northbound through lane	Add northbound right turn lane*** Add southbound through lane** Add dedicated westbound right turn lane** Increase turn bay lengths where feasible**

*Following the completion of the BRCE EPR, Industrial Parkway was restriped from 1 lane per direction (5.5m width) to 2 lanes eastbound and 1 lane westbound, but a traffic signal has yet to be added.

**Further study will be required to add these dedicated turning lanes.

***A northbound right-turn lane was added by August 2016.

2.1.4 Wellington Street Grade Separation

As the RER program advances and there are increases in rail and road traffic, several existing level crossings are expected to require grade separation. Metrolinx also maintains a policy of not creating any new level crossings on its corridors and opting for grade separation if a new crossing is required. Of the 10 grade separation projects included in the RER, the Wellington Street East grade separation is one of two priority crossings on the Barrie rail corridor, subject to further detailed studies, discussions with municipal stakeholders, and funding availability.

Currently, the at-grade level crossing is located adjacent to the Aurora GO Station and passes through an area with heritage elements. A possible concept for grade separation at this location is the road-under-rail concept which would feature trains running at street-level while all other traffic runs below the rail bridge structure. The bridge structure would accommodate two lanes of traffic in each direction and sidewalks on either side. Preliminary concerns for grade separation include the need to ensure safe and convenient connections for pedestrians and cyclists both across the rail corridor and across Wellington Street. The design concept and related concerns will be flushed out through an Environmental Assessment (EA) process which will involve municipal/local stakeholders and the public.

The EA for the Wellington Street Grade Separation is expected to commence in late 2019. It will be undertaken as an Addendum to the Barrie Rail Corridor Expansion Transit Project Assessment Process described in the previous section. The design phase is expected to occur in late 2021, followed by procurement phase in late 2022 and construction completion in early 2025.

2.1.5 2016 GO Rail Station Access Plan

In support of the RER program, Metrolinx had developed the 2016 GO Rail Station Access Plan which identifies strategies to support expected ridership growth to 2031, to improve access and increase multi-modal station access and to manage demand for new parking. The 2016 Station Access Plan also provides a documentation of system-wide and station-specific policies and recommendations that can assist municipal and transit stakeholders to make decisions on complementary programs and initiatives.

The access strategies defined in the 2016 Station Access Plan consider the role of each station along the corridor and the characteristics of the rail corridor within the context of the network. Based on the 2031 daily ridership forecast, the number of riders daily for whom their home station is Aurora GO is considered “Very High” at over 8,000 riders. The existing upstream and downstream stations are considered “Low” and “Average”, respectively.

The access strategies also draw from policies and design standards in existing Metrolinx documents such as the Mobility Hub Guidelines, the GO Transit Design Excellence Guidelines, and the GO Design Requirements Manual. The plans provide an overall access share target that prioritizes alternative modes to Drive and Park. Accordingly, the target access shares developed for the Aurora GO Station in 2031 are outlined in **Table 2-2** as follows:

Table 2-2: 2031 Target Access Shares for Aurora GO Rail Station

Mode	2015 Access Levels	2031 Access Target
Walking	3%	10-12%
Local Transit	5%	18-20%
Micro Transit	-	10-12%
Cycling	1%	3-5%
Pick up/Drop off	17%	22-24%
Carpool Passengers	4%	7-9%

Mode	2015 Access Levels	2031 Access Target
Drive & Park	70%	30-32%

Currently, Metrolinx has identified that the demand for parking supply is not sufficiently met at the Aurora GO Station, resulting in customer complaints, as well as illegal off-site parking. The Plan proposed to add 1,750 parking spaces for a total of 3,220 spaces, via surface parking or alternative parking solutions such as modular parking to the north of Centre Street along Industrial Parkway North.

Other improvements recommended in the short and medium terms to meet the access targets are listed in **Table 2-3**.

Table 2-3: Proposed Improvements to meet 2031 Target Access Share

Mode	Short Term	Medium Term
Walking	• Encourage Town of Aurora to consider Pedestrian/Cycling Infrastructure along Berczy Street; and, • Boulevard separated pedestrian/cycling connection to proposed new western GO Station entrance from Berczy Street.	• Improvements to internal circulation network within Station grounds; • Improve connectivity as part of Wellington Grade Separation - signalization of Berczy Street/Wellington Street and pedestrian bridge parallel to rail corridor; and, • Intensification in the immediate vicinity of the GO station.
Transit (Local / Micro)	• Encourage YRT to modify or expand existing bus loop to support implementation of micro-transit service.	• Encourage YRT to replace local transit routes with expanded Frequent Transit routes on Wellington Street, St. John's Sideroad, Bayview Avenue, and Bathurst Street.
Cycling	• Encourage Town to implement better lighting, wayfinding, and signage along Mary Street, Kennedy Street, Walton Drive, and the Nokiidaa Bike Trail.	• Encourage the Town to consider developing dedicated cycling infrastructure along Mary Street, Kennedy Road, and Aurora Heights Drive leading to the east/west entrances to the GO Station; and, • Consider installing new bike shelters and secure bike parking at east/west entrances.

Mode	Short Term	Medium Term
Pick up/Drop off	• Eliminate access to current pick up/drop off facility from Wellington Street via Ross Street. Consider relocating pick up/drop off area to be adjacent to the current bus loop location with priority or dedicated access to Industrial Parkway S. Additionally, consider configuring the vehicle waiting area in the form of short-term parking.	
Drive & Park/ Carpool	• Expand surface parking to the east; and, • Consider implementing the modified reserved, carpool, and EV parking program on all structure spaces.	• Consider reconfiguring internal circulation network and surface parking spaces; • Explore feasibility of east-west connection between GO station and Industrial Parkway S; and, • Consider adding 1,750 spaces.

2.1.6 Highway 404 Class Environmental Assessment and Preliminary Design Study

In 2016, a Preliminary Design and Class Environmental Assessment (Class EA) Study was completed for 26km of Highway 404 from 407 Express Toll Route (ETR) northerly to Green Lane in the Town of East Gwillimbury. This section of Highway 404 passes through six municipalities including the Town of Aurora. Highway 404 through the Town is currently six lanes wide to the south of Wellington Street and four lanes wide to the north. The Class EA Study recommends widening Highway 404 to include the addition of one High Occupancy Vehicle (HOV) lane in the northbound and southbound directions.

Following the Preliminary Design and Class EA study, a Detail Design and Class EA study has been initiated for widening Highway 404 between 407 ETR and Stouffville Road to the south of the Town of Aurora. The detailed design work for the sections north of Stouffville Road is yet to be initiated and may provide opportunities to coordinate other planned projects such as the proposed interchange at St. John's Sideroad.

2.2 Regional Planning Context

2.2.1 York Region Official Plan

The York Region Official Plan 2010 (YROP 2010) was last consolidated in April 2019. The YROP 2010 outlines growth management policies for York Region and also provides a basis for detailed planning at the local municipal level. These policies are to be supported and implemented through a set of regional guidelines, strategies and plans, including the updated York Region Transportation Master Plan and the York Region Pedestrian and Cycling Master Plan. In particular, Policy 7.2.39 calls "To improve the street network identified on Map 12 based on the following:

- the York Region Transportation Master Plan and the 10-Year Capital Plans;
- the completion of the necessary planning and environmental assessment studies for each project;
- street improvement projects that consider the needs and requirements of all forms of transportation including walking, cycling, transit, automobiles, and goods movement; and,
- priority according to the needs of pedestrians, cyclists, and transit users and the integration of adjacent land uses".

Through the YROP, the Region envisions building sustainable and healthy communities with safe and accessible mobility systems that prioritize pedestrian and cycling connections, public transit, and streets. With a focus on implementing a comprehensive active transportation network in the Region, the YROP sets a goal to reduce dependence on automobiles and divert to more sustainable modes of transportation.

In the YROP, the Town of Aurora is designated mostly as an Urban Area, featuring the rapid transit along the Barrie GO line and the Yonge Street corridor, and cycling facilities on regional as well as non-regional roads. Specific Policies of the Council that may influence the Aurora Master Transportation Study, especially with respect to improved active transportation connections and enhanced rapid transit, are noted below.

Policy 7.2.4: To develop an integrated Regional cycling network connecting people to places of recreation, services, and employment and transit.

Policy 7.2.7: To work with local municipalities to co-ordinate infrastructure within Regional rights-of-way for operating and capital components, including street lighting, sidewalks and cycling facilities.

Policy 7.2.26: To achieve an overall transit modal split of 30 percent during peak periods in the Urban Area and 50 percent in the Regional Centres and Corridors by 2031.

2.2.2 York Region Transportation Master Plan

York Region first approved an innovative Transportation Master Plan (TMP) in 2002, to define the Region's long-term vision for its transportation network and provide a framework for making transportation decisions to the year 2031. This plan was subsequently updated in 2006 and 2009 to develop a sustainable transportation system to support anticipated future growth, as well as highlight a need to promote transit and active transportation and reduce reliance on single-occupant vehicles.

In the latest TMP Update completed in 2016, the Region provides direction on policies and actions required to support growth and intensification up to 2041. The objectives of the 2016 TMP Update include improving the regional transit system to be more interconnected, developing a road network that supports all modes of transportation, and integrating active transportation in Urban Areas. Five policy areas are identified in the TMP as instruments to deliver an interconnected system of mobility to the Region. These include:

1. Creating a finer road grid network by working with the province and local municipalities to plan for and protect a series of mid-block highway crossings and continuous collector roads to increase route options for all modes of traffic.
2. Designing and operating the Regional roads to maximize capacity, e.g. re-designation of general purpose traffic lanes to HOV/Transit lanes or reserved bus lanes after established thresholds are reached.
3. Managing the Region's commuter parking strategy to allow travelers to park in the fringes of urban centres and use other modes for part of their trips with the goal to lower the number of auto trips accessing and parking at key destinations.
4. Developing a Goods Movement Strategy to support economic development of the Region
5. Coordinating with local municipalities to ensure boulevard such as sidewalks, multi-use paths and illumination, and context-sensitive streetscape elements are constructed and maintained by the Region.

The 2016 TMP also serves to update the 2008 Pedestrian and Cycling Master Plan (PCMP). The PCMP was completed to provide guidance to York Region and its municipalities over the next 25 years on implementing a comprehensive pedestrian system, and on and off-road region-wide cycling facility network. The majority of the objectives of the 2016 TMP also apply to walking and cycling modes of travel, such as developing a road network that supports all users, integrating active transportation modes into urban areas, and increasing the adoption of active transportation or transit for "last mile" trips.

The recommendations in the 2016 TMP were developed with attention to the key issues and priorities of the municipalities that make up the Region, including the Town of Aurora and will require forming partnerships with local municipalities to ensure successful implementation. The proposed 2041 road network for the Town of Aurora is illustrated in **Figure 2-1** and **Table 2-4** outlines the proposed construction timing.

The 2016 TMP has the following key recommendations:

- 4-Lane widening of St. John's Sideroad from Bathurst Street to Yonge Street and from Bayview Avenue to Highway 404;
- 4-Lane widening of Bayview Avenue from Bloomington Road to Wellington Street;
- 4-Lane widening of Leslie Street from Bloomington Road to St. John's Sideroad;
- 4-Lane widening Wellington Street from Yonge Street to the Barrie GO rail corridor;
- Grade Separation of the Barrie GO rail crossing at Wellington Street;
- Grade Separation of the Barrie GO rail crossing at St. John's Sideroad; and,
- Interchange at Highway 404 and St. John's Sideroad.

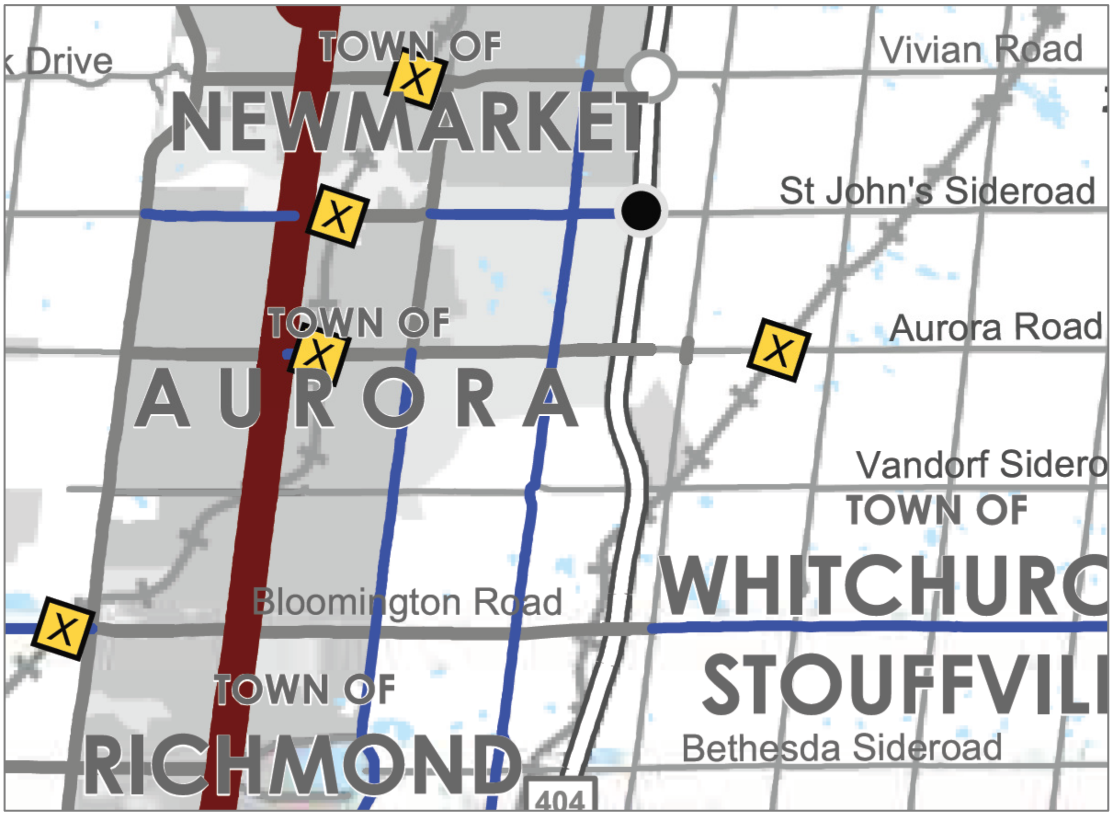


Figure 2-1: York Region TMP Proposed 2041 Road Network

Table 2-4: Phasing for York Region TMP Road Network Recommendations

Proposed	2017 - 2021	2022 - 2026	2027 - 2031	2031 - 2041
St. John's Sideroad Widening	Bayview Avenue to Highway 404[1]		Bathurst Street to Yonge Street	
Leslie Street Widening	Wellington Street to St. John's Sideroad[1]		Vandorf Sideroad to Wellington Street	Bloomington Road to Vandorf Sideroad
Wellington Street Widening		Yonge Street to the Barrie rail corridor[2]		
Bayview Avenue Widening				Bloomington Road to Wellington Street
Grade Separations		Wellington Street rail crossing	St. John's Sideroad rail crossing[2]	
New Interchange			St. John's Sideroad and Hwy 404	

[1] Expected construction completion by end of 2018

[2] Currently not included in Regional 10-year construction plan

Figure 2-2 and **Table 2-5** illustrates the Proposed 2041 Transit Network and construction phasing. The 2016 TMP has the following key recommendations:

- Rapid Transit Corridor along Yonge Street;
- Frequent Transit Network (FTN) along the full extents of Bathurst Street, Bayview Avenue, Bloomington Avenue, Wellington Street and St. John's Sideroad within the Town and Leslie Street between Wellington Street and St. John's Sideroad;
- Highway Bus Service (YRT/Viva GO) along Highway 404 through the Town;
- Potential Commuter Lots at Highway 404 interchanges with St. John's Sideroad, Wellington Street and Bloomington Road; and,
- Potential GO Station at Bloomington Road and Bathurst Street.

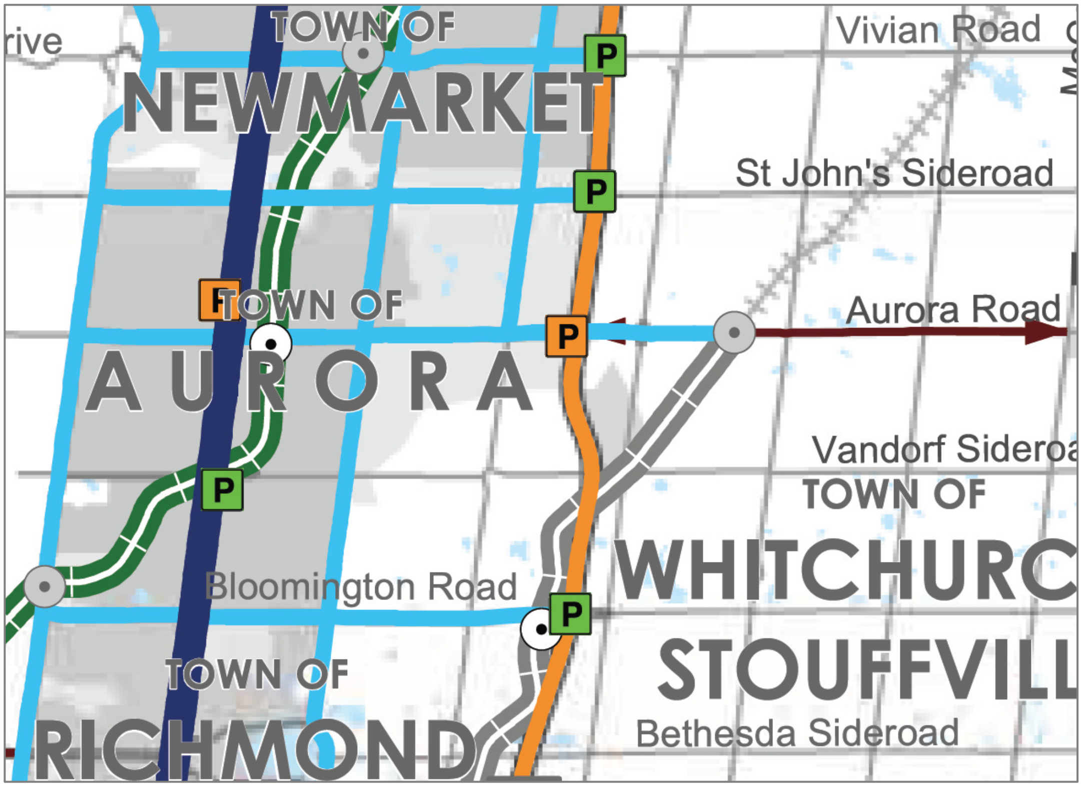


Figure 2-2: York Region TMP Proposed 2041 Transit Network

Table 2-5: Phasing for York Region TMP Transit Network Recommendations

Proposed	2017 - 2021	2022 – 2026	2027 - 2031
Rapid Transit Corridor	VIVA Curbside Service along Yonge Street	Dedicated Rapidway along Yonge Street except through Downtown Aurora	
Frequent Transit Network		FTN on Wellington Street	FTN on Bathurst Street, Bayview Avenue, Leslie Street, Bloomington Road and St. John's Sideroad
Metrolinx	Potential GO Station at Bloomington Road and Bathurst Street[1]	15-minute 2-way all day service on Barrie GO	
Highway Bus Service (YRT/Viva, GO)	Highway 404		

[1] Did not undergo new station initial business case analysis and is identified for future consideration in the context of longer term regional transportation planning (BRCE EPR)

Figure 2-3 illustrates the proposed 2041 Regional Cycling Network. The 2016 TMP has the following key recommendations:

- Dedicated cycling facilities such as bike lanes or paved shoulders along:
  - St. John’s Sideroad from Bathurst Street to Yonge Street, and Bayview Avenue to Highway 404 proposed within the 10-year Cycling Network plan;
  - Wellington Street from Bathurst Street to Industrial Parkway and Bayview Avenue to Highway 404; the section between Yonge Street and Industrial Parkway is proposed within the 10-year Cycling Network plan;
  - Bathurst Street from St. John’s Sideroad to McClellan Way; and,
  - Leslie Street from St. John’s Sideroad to Bloomington Road; the section between St. John’s Sideroad and Wellington Street is proposed within the 10-year Cycling Network plan.
- Separated cycling facilities such as cycle tracks or multi-use trails along:
  - Yonge Street from Bloomington Road to Henderson Drive and from to St. John’s Sideroad;
  - Bloomington Road from Yonge Street to Bayview Avenue;
  - Bayview Avenue from Bloomington Road to Wellington Street; and,
  - Wellington Street from Leslie Street to Highway 404.
- Local Cycling Routes of regional Significance along Yonge Street from Henderson Drive to Orchard Heights Boulevard.

Figure 2-3: York Region TMP Proposed Cycling Network

2.2.3 York Region 10-Year Roads and Transit Capital Construction Program

A number of road and transit network improvements within the Town are scheduled in the York Region 2018 – 10 Year Roads and Transit Capital Construction Program, including:

- 4-lane widening of St. John's Sideroad from Bayview Avenue to Highway 404 (under construction); and,
- Grade separation of the Barrie rail crossing on Wellington Street (12021) to be developed in coordination with Metrolinx. Note that this is separate project from the proposed widening of Wellington Street between Yonge Street and the Barrie rail corridor, which has not been included in the Region's 10-year plan.

2.2.4 York Region's Lake to Lake Cycling and Walking Trail

The concept of the York Region's Lake to Lake Cycling and Walking Trail was proposed in the 2008 PCMP. The route runs between Lake Simcoe in the northern edge of the Region to Lake Ontario in the City of Toronto. In 2013, The Region completed a comprehensive study to identify a preferred route alignment as well as preliminary design and details for implementation. The proposed route consists of multi-use paths adjacent to or in place of sidewalks, multi-use paths through green spaces, and signed routes on low volume, low speed roads. It also features connections to other major routes in the region including the Oak Ridges Trail and Humber River Trail.

Within the Town of Aurora, the Route consists of the existing Nokiidaa Trail to be extended by a new multi-use path proposed on the west side of Bayview Avenue from the existing Nokiidaa Trail terminus located to the south of Vandorf Sideroad. The construction is to occur in conjunction with future road resurfacing. The expected completion of this extension is set for 2019, along with minor improvements to pavement markings on the trail at St. John's Sideroad and Wellington Street and the trail crossing at Vandorf Sideroad.

2.2.5 Transit-Oriented Development Guidelines

The Transit-Oriented Development (TOD) Guidelines provide an approach to planning and design based on managing growth and providing efficient and effective transit services. TOD land use policies in the York Region are typically supported through local municipal official plans, secondary plans and zoning by-laws. Key focus areas of TOD are as follows:

- **Pedestrians:** A safe and convenient environment for pedestrians supports the use of transit. This includes locating people-oriented land uses as close to the street and transit services as possible.
- **Parking:** A balance is needed between adequate supply of vehicle parking and the available levels of transit service, which may be achieved through establishing a parking maximum rather than a minimum. On-street parking should be encouraged where possible, as well as shared parking arrangements amongst neighbouring properties.
- **Land Use:** Transit-oriented land use planning strategies include providing mixed-use developments, concentrating people-serving uses and employment generating uses along transit routes, incorporating transit in the early stages of development.
- **Built Form:** Compact mixed use buildings in the vicinity of transit stations along with pedestrian-scaled environments at the street level can positively impact transit ridership.
- **Connections:** to maximize the benefits of TOD, transit stops should have direct connections to sidewalks or buildings, minimizing walking distance between sites and transit stops.
- **Implementation:** Implementation of TOD policies require cooperation between the Region and local municipalities and partnering on Travel Demand Management (TDM) initiatives.

2.2.6 Moving to 2020 - York Region Transit/Viva Strategic Plan

The objectives of the York Region Transit (YRT) and Viva rapid transit services over a five year time frame covering 2016-2020 are presented in “Moving to 2020 – YRT/Viva Strategic Plan”. The plan includes a vision for integrating various transit service initiatives across York Region into the GTA Rapid Transit system. Yonge Street is a key transit corridor as it is centrally located through York Region connecting several city and town centres. The corridor is slated to be a Viva rapidway, which is composed of dedicated lanes in the centre of the road for buses serving specific Viva routes.

The Municipal Class Environmental Assessment for North Yonge Street Corridor Public Transit and Associated Road Improvements, completed in 2008, proposed a median rapidway along Yonge Street from the Town of Richmond Hill to the Town of East Gwillimbury, with the exception of a constrained segment within the Town of Aurora where transit service would run in mixed traffic.

In the current five-year strategic plan for YRT/Viva, Yonge Street through the Town of Aurora is designated as a future rapidway, with the section just south of Wellington Street facilitating curbside Viva service. In parallel, the 2016 York Region TMP identified opportunities for further studies on Viva curbside service, priority treatment through constrained areas through the Aurora downtown core, and provision for off-street parking to support the local heritage business areas.

2.3 Local Planning Context

2.3.1 Town of Aurora Strategic Plan

The Town’s Strategic Plan addresses transportation directly under the Community pillar. With the goal of supporting an exceptional quality of life for all, Objective 1 is to improve transportation, mobility, and connectivity. Key tenets of this objective include:

- Work with York Region and Metrolinx to improve transit infrastructure and commuter transportation options
- Work with residents, stakeholders and regional and provincial partners to adapt to and leverage planned investments in rapid transit
- Work with residents and stakeholders to manage impacts to the community as a result of the planned investment in rapid transit
- Advocate for the improvement of key Regional and Provincial infrastructure such as necessary road widenings and improved access to Highway 404
- Consider transportation capacity when determining the location of new municipal services/amenities

- Advocate for improved accessible transit service
- Expand east-west linkages to facilitate movement across the community for all modes of transportation

2.3.2 Town of Aurora Official Plan

The 2010 Official Plan (OP) of the Town of Aurora is the primary tool for the Town to guide its growth and development to the year 2031. The OP is written in accordance with Provincial policies and the York Region's policies to achieve the Town's development objectives in the short and long term. The policies in the OP emphasize development of a complete community, environmental responsibility, support for transit, and the efficient use of infrastructure.

The Official Plan's transportation infrastructure policies are intended to address a number of growth and sustainability objectives:

- Promoting active transportation and the use of alternate transportation modes (e.g. transit, walking & cycling) to reduce automobile dependence;
- Supporting an integrated transportation system;
- Developing and maintaining safe and comfortable pedestrian and cycling routes along roads and trails; and,
- Promoting Transit Oriented Development (TOD) and Travel Demand Management (TDM) measures to reduce single-occupant vehicle usage.

The Official Plan supports the achievement of an overall transit modal split of 30% during peak periods in the Urban Area and 50% in the Yonge Street corridor by 2031.

The OP identifies a number of existing, approved Secondary Plans, including:

- OPA 20 – Bayview Southeast Area 2A;
- OPA 30 – Bayview Northeast Area 2B;
- OPA 34 – Yonge Street South; and
- OPA 73 – Aurora Northeast 2C.

Downtown Aurora is incorporated into a broader secondary plan area known as The Aurora Promenade, with the purpose of conserving and protecting the distinct heritage and culture of the historic downtown area, while creating a vibrant urban environment with green spaces, sustainable infrastructure, and economic vitality. The Downtown, Yonge and Wellington corridors and The Aurora Promenade areas are illustrated in **Figure 2-4**.

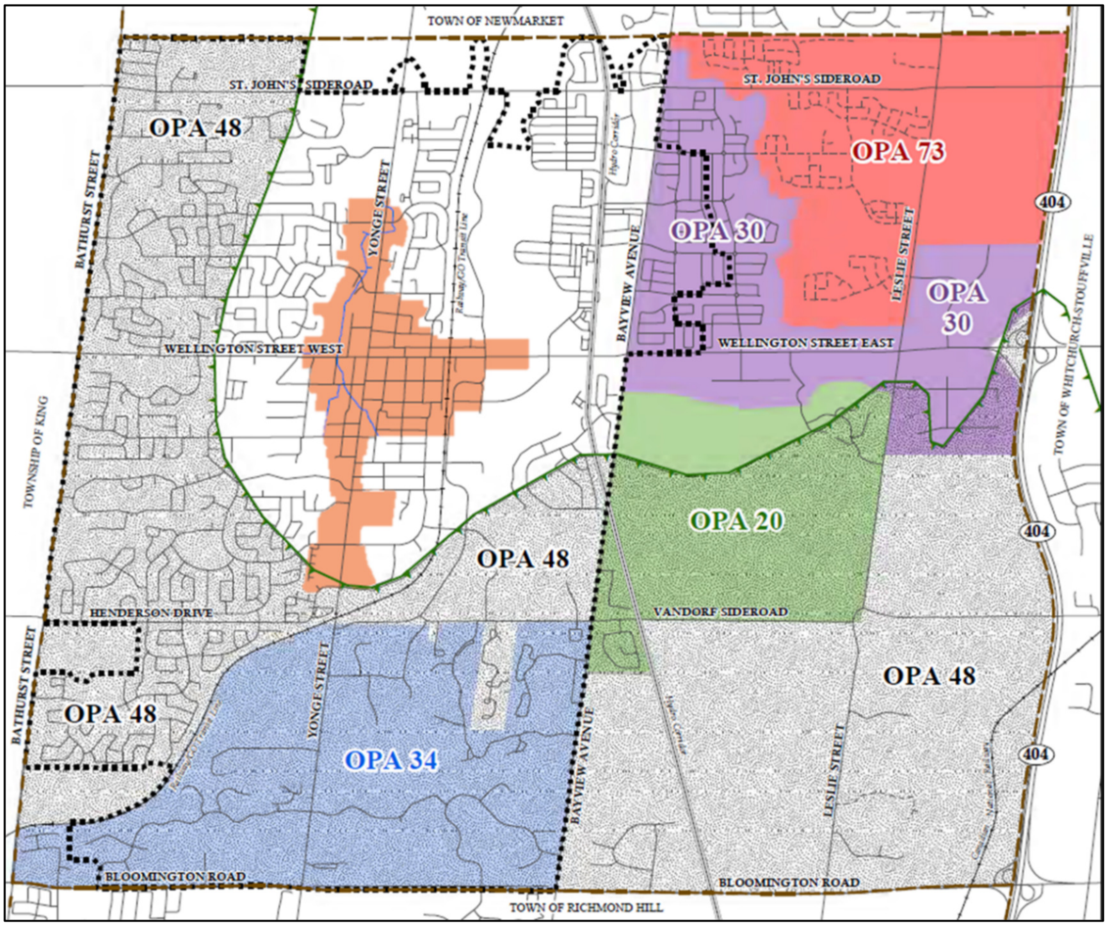


Figure 2-4: Aurora Secondary Plan Area and the Aurora Promenade

The Aurora Promenade Secondary Plan is incorporated into Chapter 11 of the OP. Key policies in the OP, including those applicable to The Aurora Promenade, are listed below:

- Growth through intensification to the 2031 horizon are planned for strategic areas, especially The Aurora Promenade, which consists of Yonge Street and Wellington Street corridors and the GO rail station; as well as within existing employment areas adjacent to Industrial Parkway and the intersection of St. John's Sideroad and Bayview Avenue.
- Growth through new development is also planned in greenfield residential and employment areas such as Area 2C located in the northeast part of the Town.
- Within the "Downtown" portion of The Aurora Promenade, Yonge Street is designated as a "Main Street" and will feature a dense mix of uses, with minimal to no setback for the buildings, on-street parking, and distinctly paved sidewalks and crosswalks.

- Wellington Street on the east side of Yonge Street passes through the portion of The Aurora Promenade known as the "Downtown Shoulder". It is designated as a "Village Street" characterized by older buildings and a mix of residential, office, and retail uses. On-street parking maybe provided on the Village Streets where possible.
- Three Primary Entryways highlighting entrances to the Aurora Promenade will include Wellington Street east of Mary Street and west of Bayview Avenue. As per the OP, the street shall be visible and accessible, and enhance the historic features of the downtown.
- The transportation system within the Town should be multi-modal with well-integrated active transportation and transit infrastructure to provide a highly interconnected, efficient and safe system of routes for all modes including pedestrians and cyclists.
- The Greenlands System should be enhanced through a comprehensive network of trails, in accordance with the Town's Trails Master Plan.
- Transit services shall be focused on the Regional roads and Municipal Collector Roads. The Town's proposed road classifications are illustrated in **Figure 2-5**.
- Any capacity constraints and subsequent additional width requirements for turn lanes or transit stations will be subject to future Transportation and Class Environmental Assessment Studies.
- Road widenings and intersection improvements and alignments will be in accordance with the Town's identified road allowance width parameters unless otherwise required, as well as all applicable standards of the York Region and/or the Town. Road allowances for the road network within the town are illustrated in **Figure 2-6**.
- Improvements should be anticipated to Highway 404, with a potential interchange at St. John's Sideroad.

The Official Plan identifies the ultimate rights-of-way of streets in Schedules 'I' and 'J'. The transportation network is intended to provide for the efficient and safe passage of pedestrians and cyclists, the operation of public transit, and a balanced approach to providing infrastructure for vehicles. More specifically, acquiring lands beyond existing right-of-way widths in accordance with Schedules 'I' and 'J' are needed to accommodate necessary features such as: embankments, grade separations, and additional pavement or sidewalk widths at intersections, transit facilities or to provide for necessary improvements in safety, universal accessibility or visibility in certain locations.

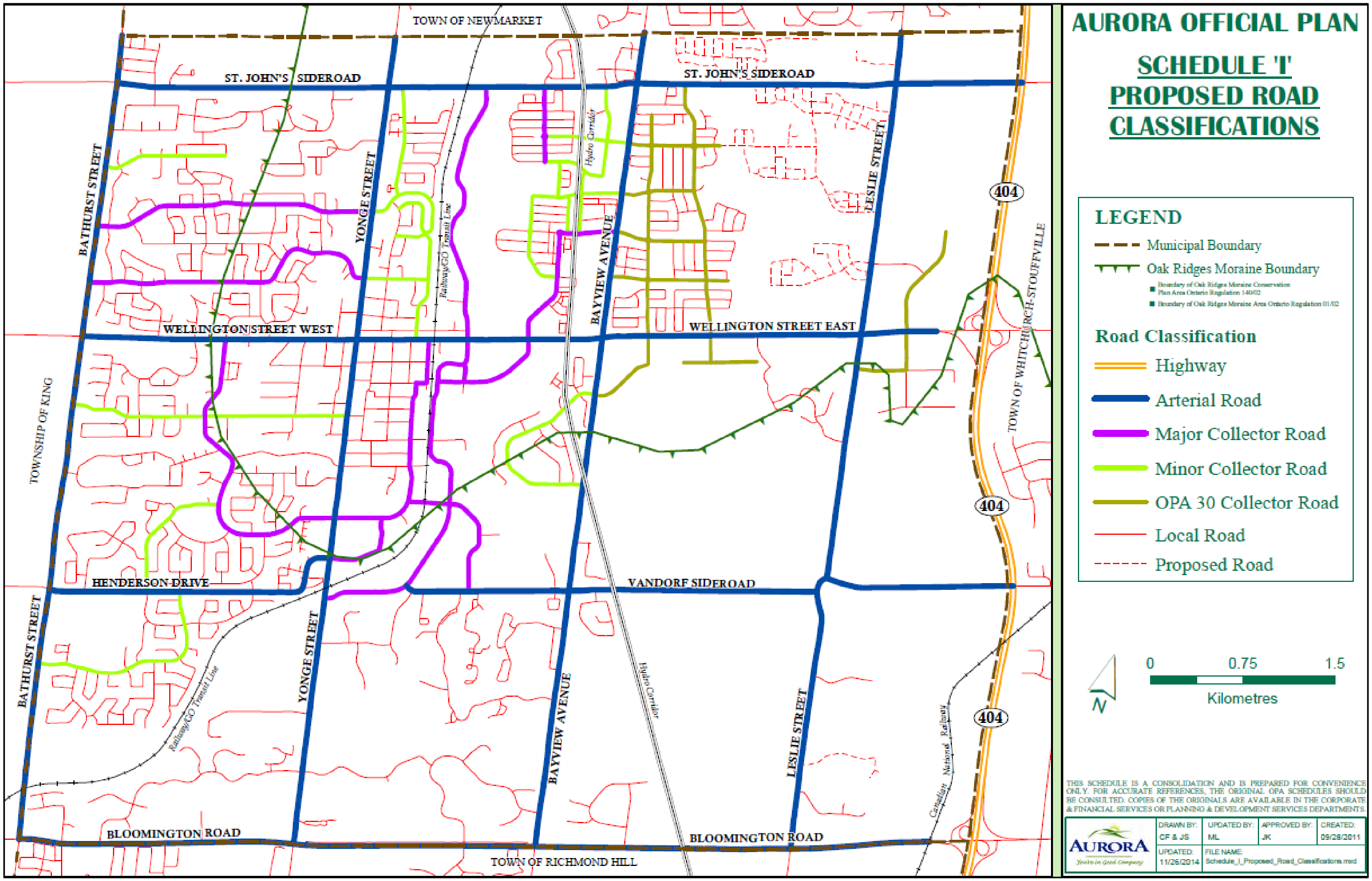


Figure 2-5: Town of Aurora Proposed Road Classification

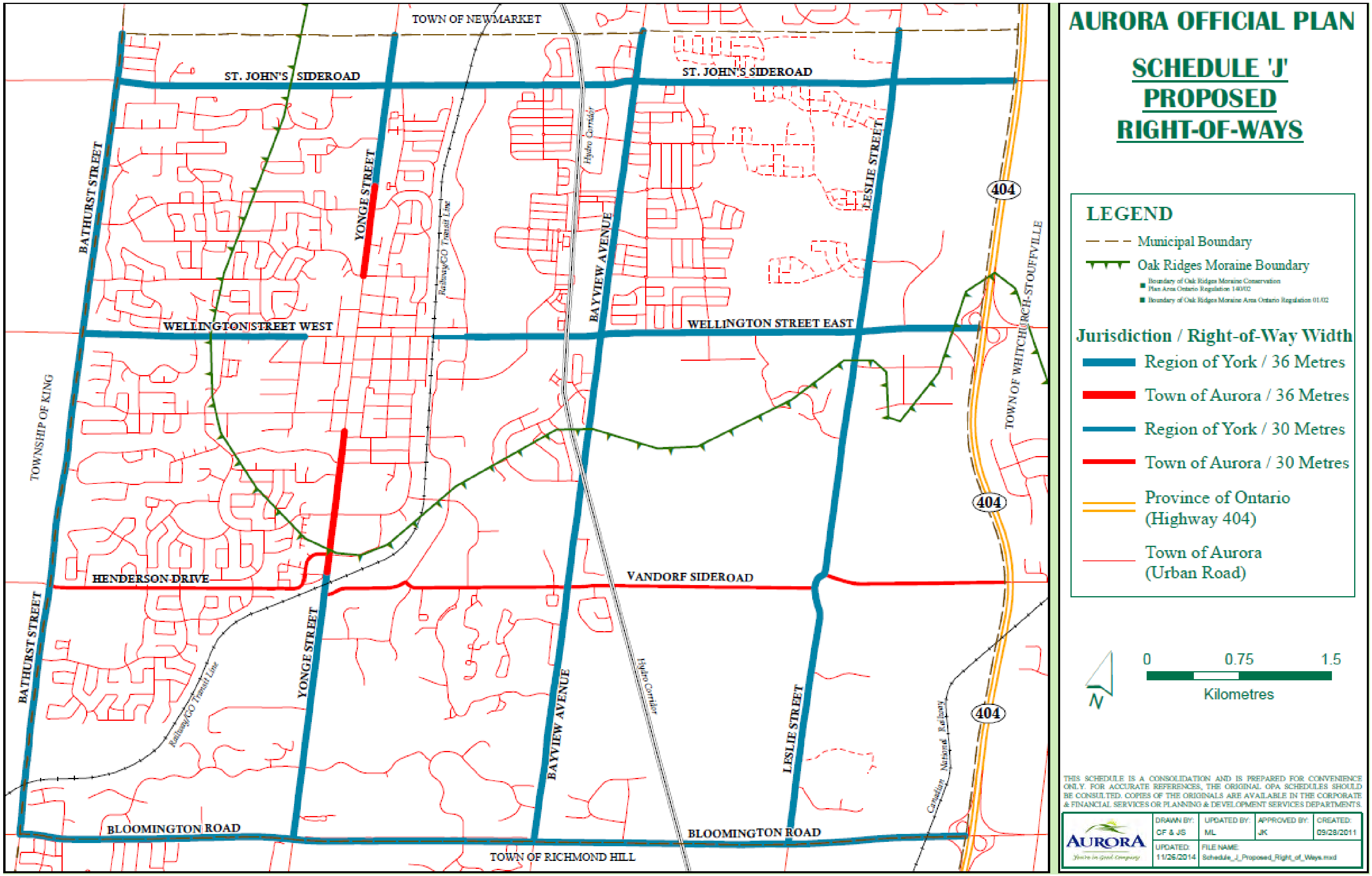


Figure 2-6: Town of Aurora Proposed Right-of-Way

2.3.3 Trails Master Plan

The Town of Aurora's Trails Master Plan was completed in 2011 as a long-term, 50 year plan which provides recommendations for a connected trails network, design of off-road trails, policies related to trail planning, potential education and promotion programs that support trail use and healthy living, and a phased implementation strategy. The Plan includes a Town-wide Trail Route Network by Facility Type which summarizes the recommended network including new proposed on and off-street facilities, Nokiidaa and Oak Ridges Trail alignments, potential grade separated trail crossings, and potential new linkages.

2.3.4 OPA 73: Area 2C Secondary Plan

The Area 2C lands are located in the northeast corner of the Town of Aurora bounded by Highway 404 and St. John's Sideroad to the east and north respectively, with the southern and western boundaries formed by existing residential subdivisions and commercial land uses. Over the next 20 years, these lands are slated to accommodate between 8,000 and 9,000 new residents as well as 4,400 and 5,500 employment opportunities.

Under the Secondary Plan, a Business Park is proposed on the east side of Leslie Street to promote the Town's economic development and long-term prosperity. The location of the proposed Business Park affords it visibility and accessibility from Highway 404 as well as the existing interchange at Wellington Street to the south and the potential interchange at St. John's Sideroad to the north. A road network to support the Business Park is envisioned to include a system of highly interconnected Collector and Local Roads.

Residential neighborhoods, protected parts of the Greenlands System and public spaces are also included within the Area 2C lands. The residential neighborhoods are planned to the west of Leslie Street and will blend a mix of low, medium, and high-density housing types as well as public open space features. The proposed land uses within the 2C Secondary Plan Area are shown in **Figure 2-7**. In terms of transportation infrastructure, a number of general objectives that apply throughout the 2C Secondary Plan area are:

- Promoting Active Transportation and the use of alternate modes to driving, such as transit, walking, and cycling;
- Supporting a basic, reliable, accessible, and integrated transit system; and,
- Ensuring that all roads and trails provide safety, comfort and convenience for pedestrians and cyclists.

The proposed road network as shown in **Figure 2-8** balances motor vehicle usage with safe connections for pedestrians and cyclists and support for public transit.

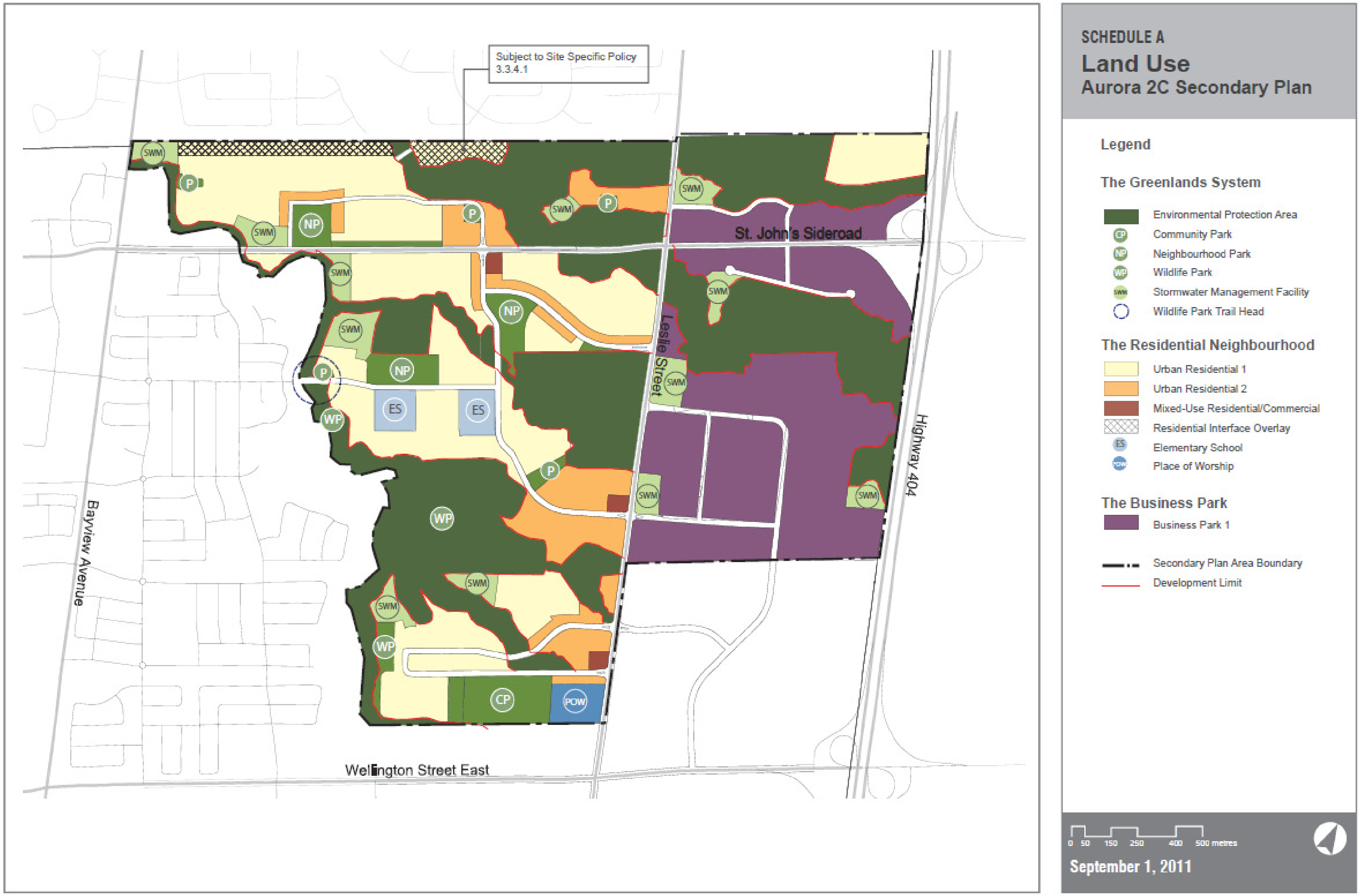


Figure 2-7: Area 2C Secondary Plan Land Use

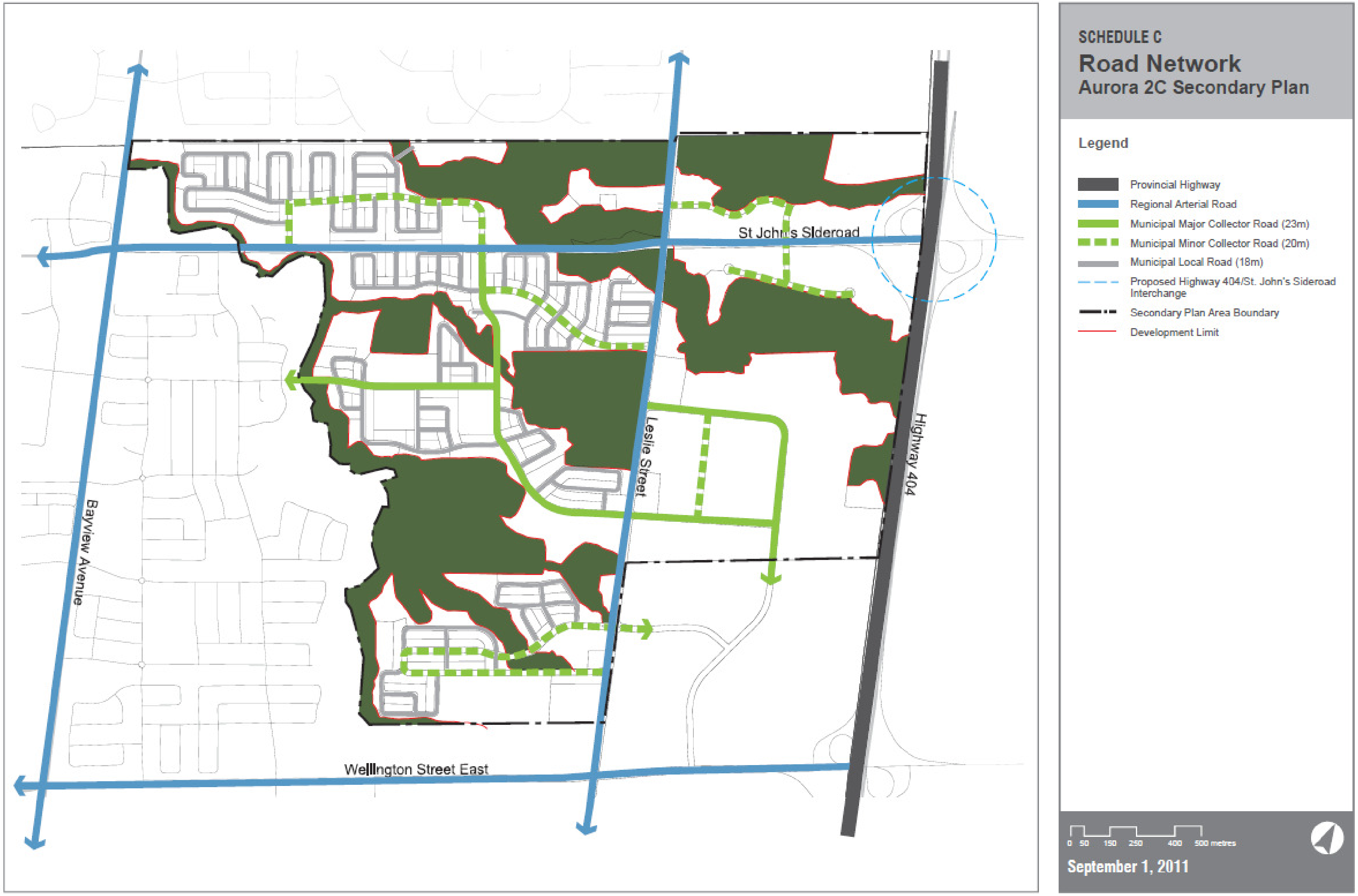


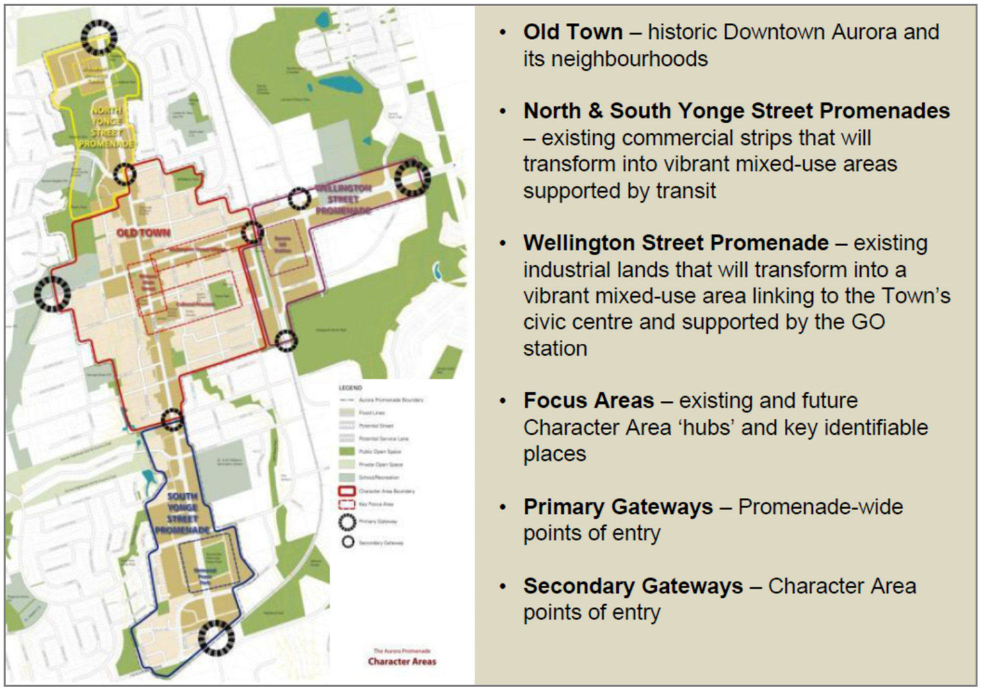
Figure 2-8: Area 2C Secondary Plan Road Network

2.3.5 Aurora Promenade Concept Plan, Streetscape Design & Implementation Plan

The Aurora Promenade is located in the historic downtown core of the Town of Aurora. The policies regarding the Aurora Promenade within the Town's Official Plan are based on the Aurora Promenade Concept Plan (2010) and are to be further implemented through the proposed Streetscape Design & Implementation Plan (2013).

The purpose of the Aurora Promenade Concept Plan is to set forth a vision for the Yonge and Wellington Street corridors, two main streets within the Town which intersect in the downtown core. Yonge Street within the Aurora Promenade extends 3.2 km from Orchard Heights Boulevard in the north to the Canadian National rail tracks to the south. Wellington Street extends 1.6 km from Mill Street to the west to John West Way to the east.

The Aurora Promenade is divided into four character areas – the Downtown, North and South Yonge Street Promenades, and the Wellington Street Promenade as illustrated in **Figure 2-9**. The Downtown, where the two main streets intersect has a distinct heritage that should be preserved.



- **Old Town** – historic Downtown Aurora and its neighbourhoods
- **North & South Yonge Street Promenades** – existing commercial strips that will transform into vibrant mixed-use areas supported by transit
- **Wellington Street Promenade** – existing industrial lands that will transform into a vibrant mixed-use area linking to the Town's civic centre and supported by the GO station
- **Focus Areas** – existing and future Character Area 'hubs' and key identifiable places
- **Primary Gateways** – Promenade-wide points of entry
- **Secondary Gateways** – Character Area points of entry

Figure 2-9: Aurora Promenade Character Areas

One of the main objectives of the Aurora Promenade Concept Plan is to shift the area away from an auto-dependent suburban location to a vibrant community, with pedestrian facilities, transit, and active transportation integrated into the design. With the planned improvements in higher order transit, i.e. the expansion of train service at

Aurora GO and the planned rapid transit along Yonge Street, there are opportunities to maintain the existing road capacity, extend and complete the street grid to enhance active transportation use but with attention to limit through-traffic infiltration into neighborhoods, improve cycling routes, and modify parking supply in the downtown area.

In the Street Scape Design and Implementation Plan, three streetscape types were investigated based on the character areas – Boulevards and Village Streets in the North Yonge Street, South Yonge Street and Wellington Street Promenades, and Main Streets within the Downtown. The deficiencies in each character area were noted. All streetscapes were found to require sidewalk enhancements, increase in street and pedestrian lighting, and robust landscaping.

The recommendations for Boulevards include 3m wide sidewalks to accommodate pedestrians and cyclists, continuous street trees, unique and uniform street furnishings such as trash receptacles and bike rings, and unique street and pedestrian lighting. Similar recommendations are made for Village Streets but include 2.1m sidewalks on Yonge Street and 1.5m sidewalks in residential areas on Wellington Street. Along Main Streets in the historic downtown, there are often narrow concrete sidewalks with heritage pedestrian lighting and little or no frontage zones. It is recommended that the sidewalks be upgraded using heritage brick style pavers that extend from the curb zone to building face.

3 Future Conditions Assessment

A transportation needs analysis based on projected growth to the year 2041 is documented in this section to identify the need for growth related transportation improvements to the Town's transportation network.

3.1 Land Use Forecasts

The Town of Aurora is expected to grow from approximately 63,000 persons and 29,000 jobs in 2019 to approximately 79,000 persons and 38,000 jobs by 2041. Growth forecasts for the Town are based on most recent draft York Region projections from their ongoing Municipal Comprehensive Review and are subject to change. The York Region projections are summarized in **Table 3-1**.

Table 3-1: Town of Aurora Population and Employment Forecasts

Town of Aurora	2021	2031	2041
Population	64,500	74,800	79,000
Employment	31,600	35,500	38,500

Source: Preferred Growth Scenario (45% intensification), Nov. 2015

3.2 Proposed Improvements

York Region's Transportation Master Plan has identified road and transit network improvements as noted previously in **Section 2.2.2**:

- 4-Lane widening of St. John's Sideroad from Bathurst Street to Yonge Street and from Bayview Avenue to Highway 404;
- 4-Lane widening of Bayview Avenue from Bloomington Road to Wellington Street;
- 4-Lane widening of Leslie Street from Bloomington Road to St. John's Sideroad;
- 4-Lane widening Wellington Street from Yonge Street to the Barrie GO rail corridor;
- Grade Separation of the Barrie GO rail crossing at Wellington Street;
- Grade Separation of the Barrie GO rail crossing at St. John's Sideroad; and,
- Interchange at Highway 404 and St. John's Sideroad.

With the proposed Regional improvements, the Town's major arterial road concessions, with the exception of Henderson Drive / Vandorf Sideroad, will have four vehicular traffic lanes to serve projected growth. An illustration of the Town's future transportation network inclusive of proposed Regional improvements is provided, relative the Right-of-Way widths and road jurisdiction from the Town's Official Plan

Schedule J, in **Figure 3-1**. It should be noted that this is a new proposed map and has no status in the Official Plan, and although these improvements have been identified in the Region's T.M.P., they have not been included in the 10-Year Road Capital Construction Plan.

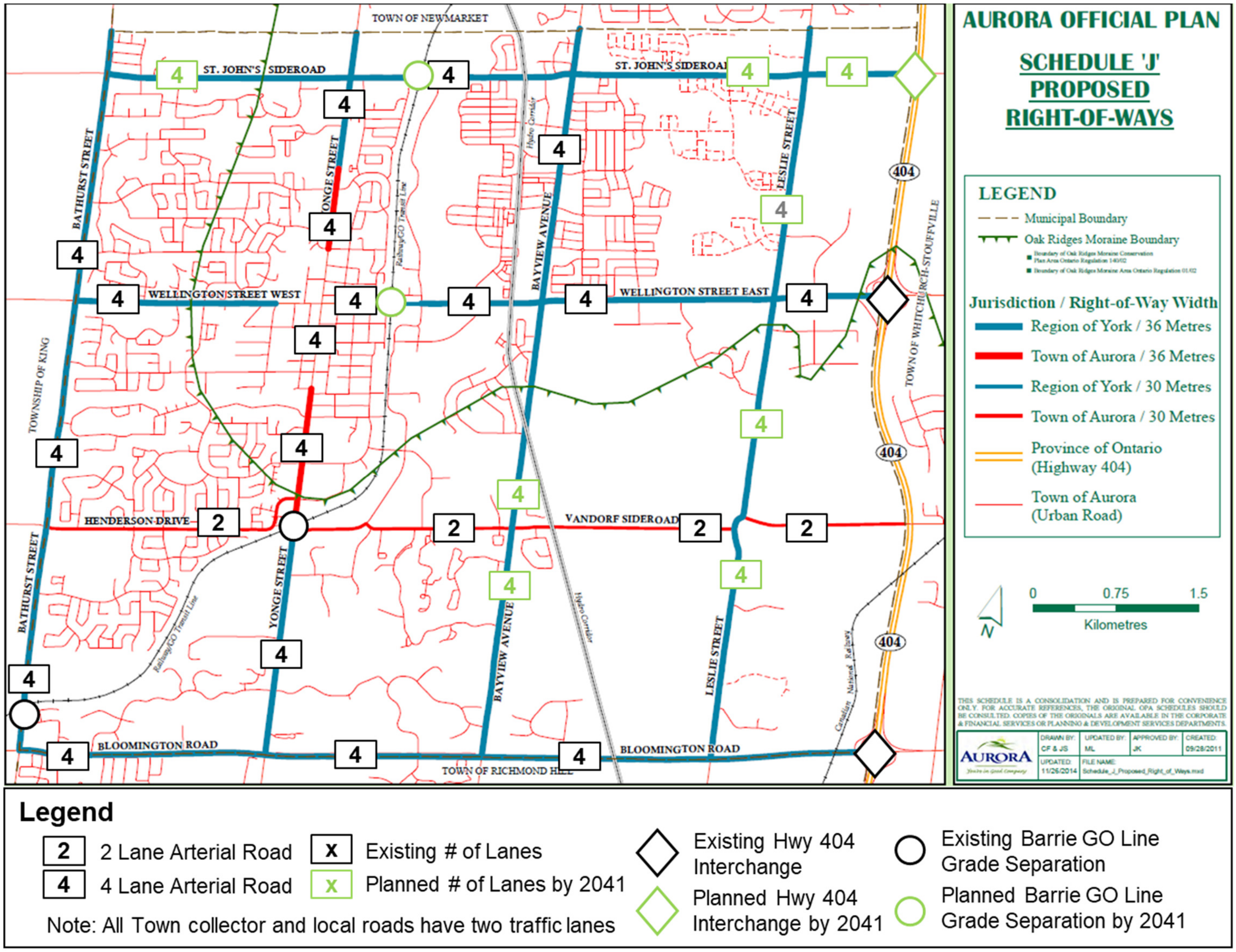


Figure 3-1: Planned Transportation Network by 2041

3.3 2041 Traffic Forecasts

The Town-wide capacity needs are identified based upon the planned regional improvements and population and employment growth forecasts to the year 2041. Screenline volume to capacity ratios are summarized in **Table 3-2** for southbound AM peak hour, peak direction traffic, and **Table 3-3** for eastbound AM peak hour peak direction traffic. A Town-wide volume to capacity (V/C) ratio plot for the 2041 AM peak hour is provided in **Figure 3-2**. Traffic volumes which exceed a V/C Ratio of 1.00 are anticipated to experience significant congestion, while V/C Ratios between 0.85 and 1.00 experience moderate levels of congestion.

Table 3-2: Southbound AM Peak Hour Screenline Traffic Volumes and V/C Ratios

Screenline	Bathurst	Yonge	Bayview	Leslie	TOTAL
2041 AM Peak Hour SB Volume					
South of St. John's	1,930	1,090	1,180	1,440	**5,640**
North of Wellington	2,160	1,310	1,620	1,220	**6,310**
South of Wellington	2,040	1,060	1,830	1,510	**6,440**
North of Vandorf/Henderson	2,020	1,270	1,980	980	**6,250**
North of Bloomington	2,440	1,380	1,680	950	**6450**
V/C Ratio					
South of St. John's	0.80	0.78	0.74	0.90	**0.81**
North of Wellington	0.90	0.94	1.01	0.76	**0.90**
South of Wellington	0.85	0.76	0.92	0.94	**0.87**
North of Vandorf/Henderson	0.84	0.91	0.99	0.61	**0.84**
North of Bloomington	1.02	0.77	0.84	0.59	**0.83**

Table 3-3: Eastbound AM Peak Hour Screenline Traffic Volumes and V/C Ratios

Screenline	St. John's	Wellington	Vandorf/ Henderson	Bloomington	TOTAL
2041 AM Peak Hour EB Volume					
East of Bathurst	730	650	110	940	**2,430**
East of Yonge	1,470	1,190	580	1,480	**4,720**
East of Bayview	1,040	1,050	540	1,830	**4,460**
East of Leslie	1,290	900	470	1,760	**4,420**
V/C Ratio					
East of Bathurst	0.46	0.41	0.22	0.47	**0.43**
East of Yonge	0.92	0.74	0.83	0.74	**0.80**
East of Bayview	0.65	0.66	0.77	0.92	**0.76**
East of Leslie	0.81	0.56	0.67	0.88	**0.75**

Peak direction southbound, AM peak hour traffic volumes were assessed either north of or south of major east-west roads in the Town. Looking at total screenline traffic volumes, only the north of Wellington and south of Wellington screenlines are approaching capacity. The other screenlines south of St. John's, north of Vandorf/Henderson, and North of Bloomington have spare capacity across the total screenline; however, local congestion hotspots are noted. This includes on Bayview

Avenue north of Wellington Street and Bathurst Street north of Bloomington Road. In the east-west direction, all screenlines are under the moderate congestion threshold V/C Ratio of 0.85.

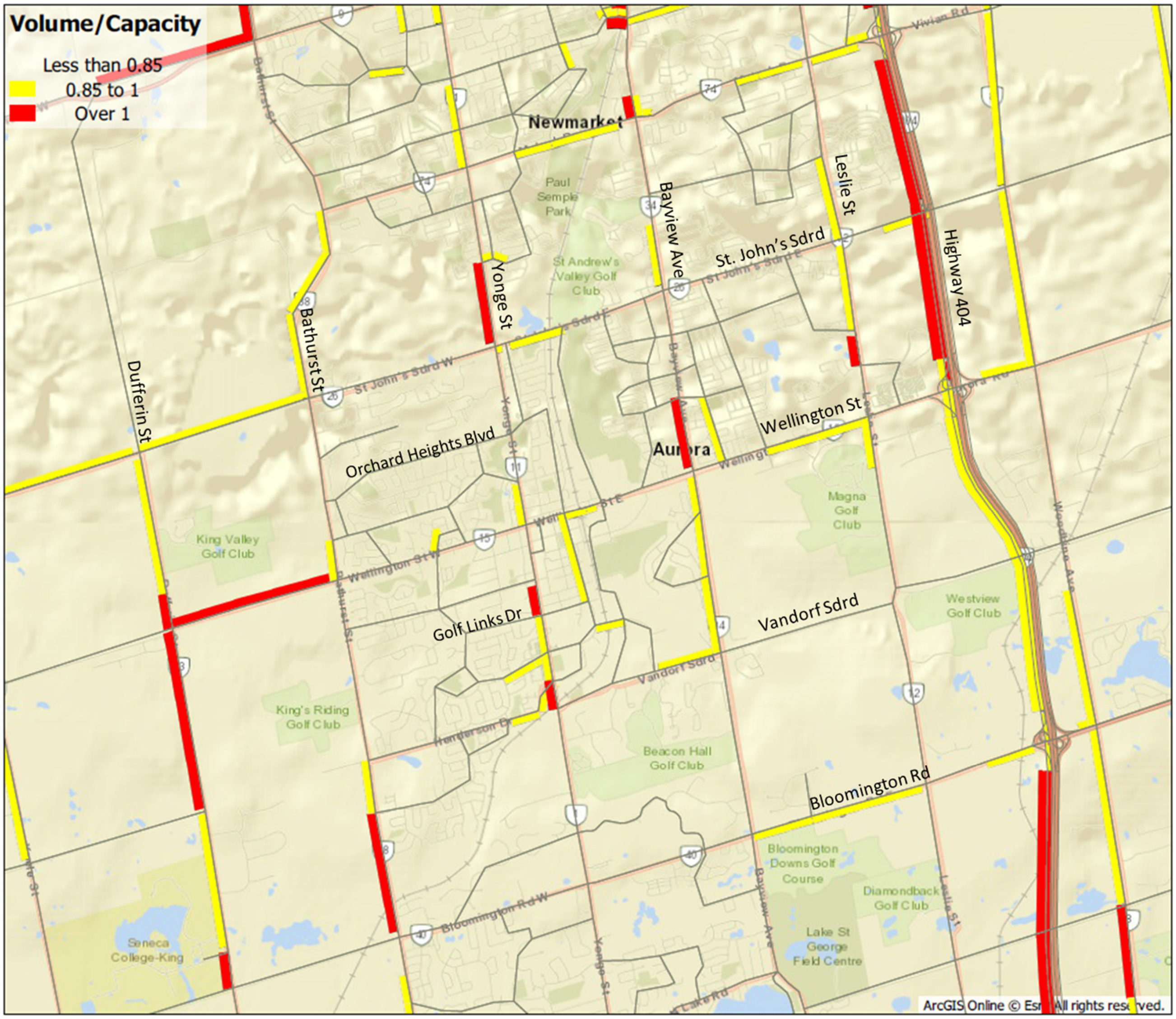


Figure 3-2: 2041 AM Peak Hour V/C Ratios

3.4 Alternative Solutions

To address the localized congestion hotspots noted in the future conditions assessment the following planning alternatives are identified:

1. Do Nothing
2. Travel Demand Management (TDM), Transit and Active Transportation Improvements

3. Operational Improvements
4. Road Widenings

3.4.1 Alternative 1: Do Nothing

Beyond the currently planned Regional improvements identified, this alternative assumes that the Town will not invest in any transportation programs or infrastructure improvements to the year 2041. Given the traffic congestion issues noted, **this alternative is not recommended to be carried forward.**

3.4.2 Alternative 2: TDM, Transit, and Active Transportation Improvements

This alternative proposes that the Town continue to work in partnership with York Region, Smart Commute Central York, Metrolinx, and the development industry to implement Travel Demand Management (TDM) policies and programs that encourage non-automobile travel to and from key destinations within and surrounding the Town. Key directions in this Alternative include:

- Implementing TDM recommendations through development and through the York Region Mobility Plan Guidelines for Development;
- Reviewing the Town's Zoning By-law 6000-17 zoning provisions for bicycle parking rates and provision of bicycle racks at offices, transit stations and stops, and other supporting facilities such as shower rooms, in order to further encourage bicycle travel;
- Reviewing policies to include flexible working hours, carpool and transit incentives;
- Encourage alternative modes of access at the Aurora GO Station including supporting the recommendations of the Metrolinx GO Rail Station Access Plan;
- Improving access to sustainable travel information, i.e. promote YRT information on Town website, encourage active transportation, etc.;
- Contribute funding (i.e. through Development Charges) to Smart Commute Central York to ensure the Town's commitment to sustainable workplace travel programming; and,
- Continue to implement the recommendations of the 2011 Trails Master Plan and update the Plan accordingly.

Based on Provincial and Regional directions to encourage transit-oriented development and sustainable travel, as well as the Town's own Strategic Plan, **Alternative 2 is recommended to be carried forward.**

3.4.3 Alternative 3: Operational Improvements

Operational improvements may take the form of traffic signal timing adjustments, traffic lane changes, safety improvements, parking modifications and sidewalk network improvements. On the basis that these have little impact to the built form of the Town with the ability to provide significant operational benefits, **Alternative 3 is recommended to be carried forward**. Further exploration of these operational improvements is provided in **Sections 4** and **5** of this report.

3.4.4 Alternative 4: Road Capacity Improvements

Road capacity improvements involve vehicular traffic lane widenings, which would generally result from the regional capacity analysis documented in report **Section 3.3**. While there are some localized congestion hotspots noted by the analysis, major roadworks associated with vehicular lane widenings on Regional roads within the Town are not recommended at this time. Because V/C ratios are either within the moderate congestion zone between 0.85 and 1.0 or just above 1.0, it is recommended that mitigation through TDM and operational improvements be considered a first priority without investing heavily into infrastructure improvements. As such **Alternative 4 is not recommended to be carried forward**.

3.5 Recommended Solution

Based upon a review of future conditions, it is recommended that the Town's transportation strategy to accommodate growth to the year 2041 focus on managing the existing network while improving connectivity and safety particularly for pedestrians and cyclists. This includes focus on travel demand management (TDM), supporting and encouraging transit use, and active transportation improvements including completing the sidewalk network and implementing the recommendations of the 2011 Trails Master Plan. To keep vehicular traffic moving efficiently, operational improvements are recommended such as traffic signal timing adjustments, travel lane modifications, safety improvements, and parking management.

It is noted that after accounting for planned Regional improvements, no major vehicular capacity improvements such as lane widenings are required by 2041.

4 Traffic Operations and Safety Review

An operations and safety review was conducted to summarize and discuss the key findings from a detailed collision analysis and site visits to identify possible contributing factors for the high collision intersections within the jurisdiction of the Town. The findings of the review will indicate if geometric restrictions, visual obstructions, insufficient signage, access point locations, or human factors contribute to the high collision rates. This information will subsequently help identify appropriate mitigation measures for the Town's consideration, as well as guide the Town in prioritizing potential safety enhancements.

4.1 Traffic Operations Analysis

Along the Yonge Street corridor, a capacity and level of service analysis and a progression analysis were conducted to identify any potential improvements to address existing operational issues.

4.1.1 Data Sources

Existing Turning Movement Counts were obtained by Ontario Traffic Inc. on Wednesday June 27, 2018, from 7am – 10am, 11:30am – 1:30pm, and 3:30pm – 6:30pm at the following eight intersections along Yonge Street:

- Yonge Street & Henderson Drive/Allaura Boulevard
- Yonge Street & Murray Drive/Edward Street
- Yonge Street & Brookland Avenue
- Yonge Street & Golf Links Drive/Dunning Avenue
- Yonge Street & Kennedy Street
- Yonge Street & Wellington Street
- Yonge Street & Aurora Heights Drive/Mark Street
- Yonge Street & Orchard Heights Boulevard/Batson Drive

Existing Turning Movement Counts are provided in **Appendix A**.

4.1.2 Methodology

Existing intersection operations were assessed for the signalized intersections along the corridor using the software program, Synchro, which employs methodology from the *Highway Capacity Manual (HCM 2000)* published by the Transportation Research Board National Research Council. The signalized intersection analysis considers two separate measures of performance:

- The capacity of all intersection movements, which is based on a volume to capacity ratio (v/c); and
- The level of service (LOS) for all intersection movements, which is based on the average control delay per vehicle for each of various movements through the intersection, and for the overall intersection.

Intersection operation analysis is conducted with focus on the overall level of service (LOS) for each intersection, defined by HCM for signalized and unsignalized intersections as a function of the average vehicle control delay. HCM LOS definitions are summarized in **Table 4-1.**

Table 4-1: Highway Capacity Manual Level of Service Definitions for Intersections

LOS	Signalized Intersection Average Veh. Control Delay	Unsignalized Intersection Average Veh. Control Delay	LOS Recommendation
A	≤10 sec	≤10 sec	Acceptable
B	10-20 sec	10-15 sec	Acceptable
C	20-35 sec	15-25 sec	Acceptable
D	35-55 sec	25-35 sec	Somewhat undesirable
E	55-80 sec	35-50 sec	Undesirable
F	≥80 sec	≥50 sec	Unacceptable

4.1.3 Signal Timing Plans

Signal timing plans along Yonge Street were updated on December 2016 at the Yonge Street & St. John's Sideroad intersection (100s cycle length), November 2017 at the Yonge Street & Wellington Street intersection (120s cycle length), and the end of 2011 along the rest of the corridor (100s cycle length). A copy of the Signal Timing Plans are provided in **Appendix A**.

4.1.4 Level of Service Analysis

Based on the Synchro analysis, there are no existing operational constraints at the study intersections. **Table 4-2** summarizes the overall operations at each intersection. Detailed Synchro Analysis reports are provided in **Appendix A**.

Table 4-2: Existing 2018 Conditions Overall Intersection Level of Service

Location	AM Peak Hour			MD Peak Hour			PM Peak Hour		
	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay
Yonge Street & Henderson Drive/Allaura Boulevard	B	0.44	16.4	B	0.50	19.3	C	0.70	25.2
Yonge Street & Murray Drive/Edward Street	B	0.36	14.1	C	0.45	20.8	B	0.51	17.8
Yonge Street & Brookland Avenue	A	0.28	6.5	A	0.34	6.6	A	0.41	6.6
Yonge Street & Golf Links Drive/Dunning Avenue	B	0.34	13.1	B	0.33	10.1	B	0.41	11.5
Yonge Street & Kennedy Street	A	0.30	7.5	B	0.38	10.1	A	0.41	7.3
Yonge Street & Wellington Street	C	0.80	27.9	C	0.80	27.9	C	0.88	30.5
Yonge Street & Aurora Heights Drive/Mark Street	B	0.37	14.6	B	0.43	10.5	B	0.50	12.3
Yonge Street & Orchard Heights Boulevard/Batson Drive	B	0.38	17.1	B	0.47	17.2	B	0.55	17.9

Yonge Street & Wellington Street is operating at a Level of Service ‘C’ during the AM, Midday, and PM peak hours, with v/c ratios of 0.80, 0.80, and 0.88, respectively. This intersection also experiences the longest delays of up to 30.5 seconds during the PM peak hour; however, it is considered acceptable ***from an intersection capacity standpoint***. In terms of specific movements, only the eastbound through volume on Wellington Street at Yonge Street operates at a v/c ratio of 0.85 or greater – at 0.85 and at 0.87 in the AM and PM respectively.

4.1.5 Traffic Signal Progression Analysis

North-South Approach Level of Service

With focus on the northbound and southbound movements for the purposes of Yonge Street progression, the approach LOS is summarized for the intersections along Yonge Street in **Table 4-3**.

Table 4-3: Existing 2018 Conditions North-South Approach Level of Service

Location	AM Peak Hour		PM Peak Hour		MD Peak Hour	
	NB	SB	NB	SB	NB	SB
Study Intersections						
Yonge Street and Henderson Drive/Allaura Boulevard	A	A	B	C	A	B
Yonge Street and Murray Drive/Edward Street	A	A	A	B	B	B
Yonge Street and Brookland Avenue	A	A	A	A	A	A
Yonge Street and Golf Links Drive/Dunning Avenue	A	A	A	A	A	A
Yonge Street and Kennedy Street	A	A	A	A	A	A
Yonge Street and Wellington Street	C	C	C	C	B	B
Yonge Street and Aurora Heights Drive/Mark Street	A	A	A	A	A	A
Yonge Street and Orchard Heights Boulevard/Batson Drive	A	A	B	B	A	B

All northbound and southbound approaches operate at a LOS of A or B with the exception of Yonge Street and Wellington Street. During the AM and PM peak periods, the average delay both northbound and southbound at the Yonge-Wellington intersection is between 20-35 seconds which is a generally considered an acceptable amount of delay.

Travel Times

Based on the Synchro analysis, under 2018 existing conditions, travel times on Yonge Street between Henderson Drive/Allaura Boulevard and Orchard Heights / Batson Drive range between 4.9 minutes to 5.9 minutes. Travel time estimates northbound and southbound for different times of day are summarized in **Table 4-4**.

Table 4-4: Yonge Street Travel Times, Existing Conditions

Location	AM Peak Hour		PM Peak Hour		MD Peak Hour	
	NB	SB	NB	SB	NB	SB
2018 Travel time (seconds)	357	318	301	311	318	294
2018 Travel time (minutes)	5.9	5.3	5.0	5.2	5.3	4.9
2012 Travel time (seconds)	341	334	362	333	284	246
2012 Travel time (minutes)	5.7	5.6	6.0	5.6	4.7	4.1

With comparison to the previous 2012 travel times documented in the Town of Aurora Master Transportation Operations Study 2013, the range of travel times was 4.1 minutes to 6.0 minutes. The mid-day and PM peaks in particular have seen higher delays, likely due to increased recreational or non-commuter traffic which tends to be higher in the PM and mid-day periods.

4.1.6 Time Space Diagrams

Time-space diagrams were developed using Synchro software to complement the analysis. These diagrams give an indication of existing green bands during the AM, mid- day off peak and PM peak hours, and are illustrated in **Figure 4-1, Figure 4-2**, and **Figure 4-3**, respectively.

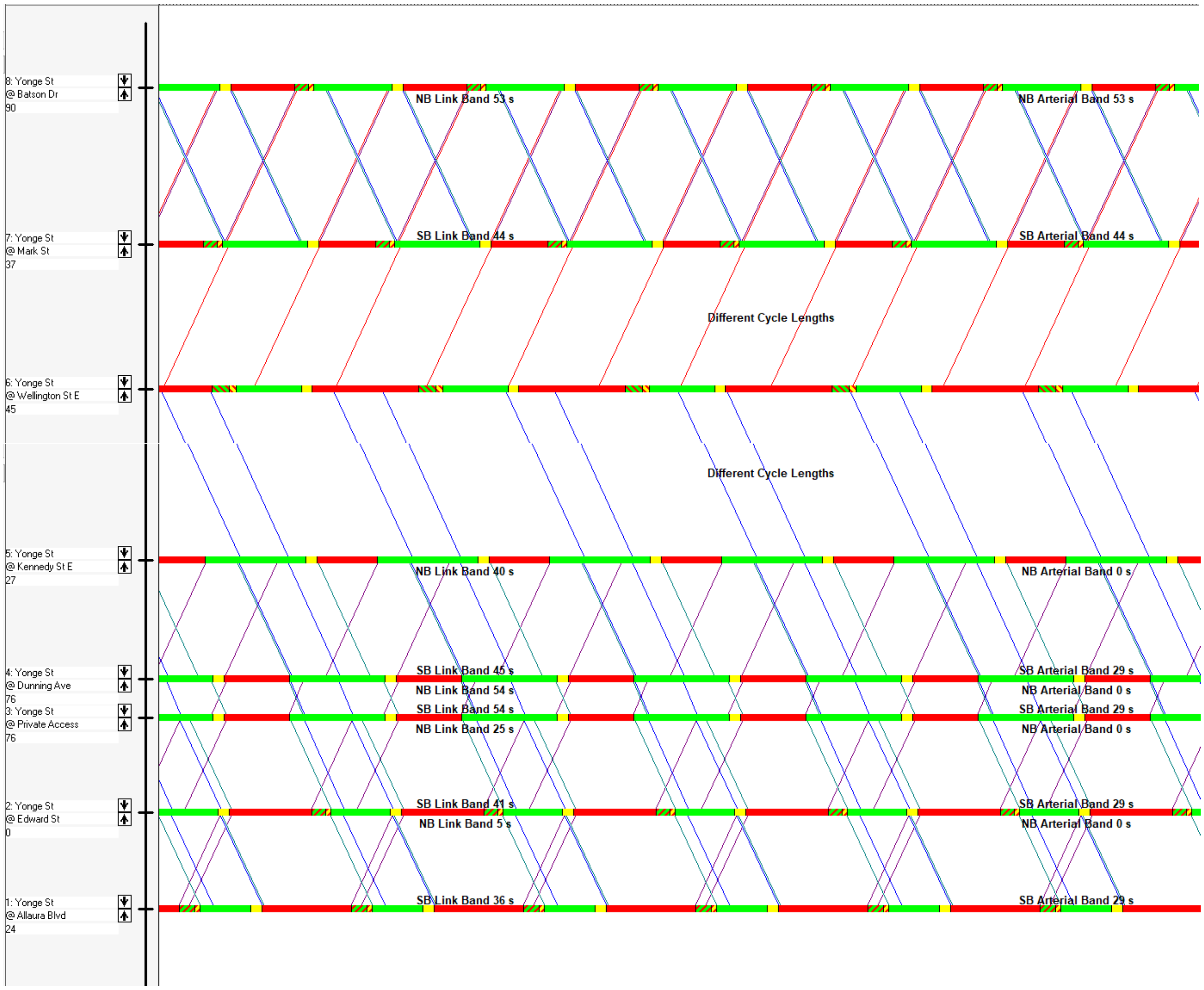


Figure 4-1: AM Peak Time-Space Diagram

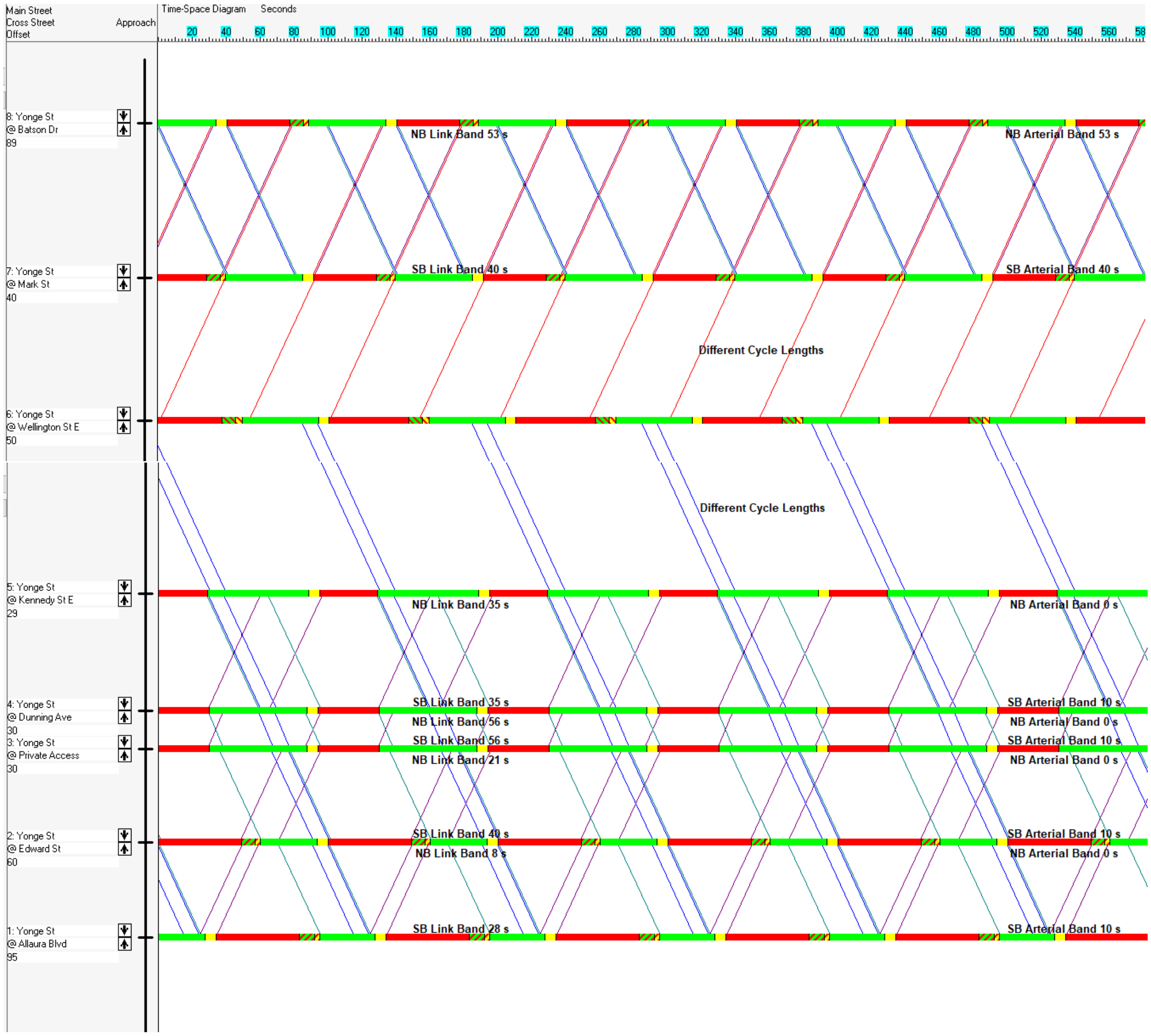


Figure 4-2: Mid-Day Time-Space Diagram

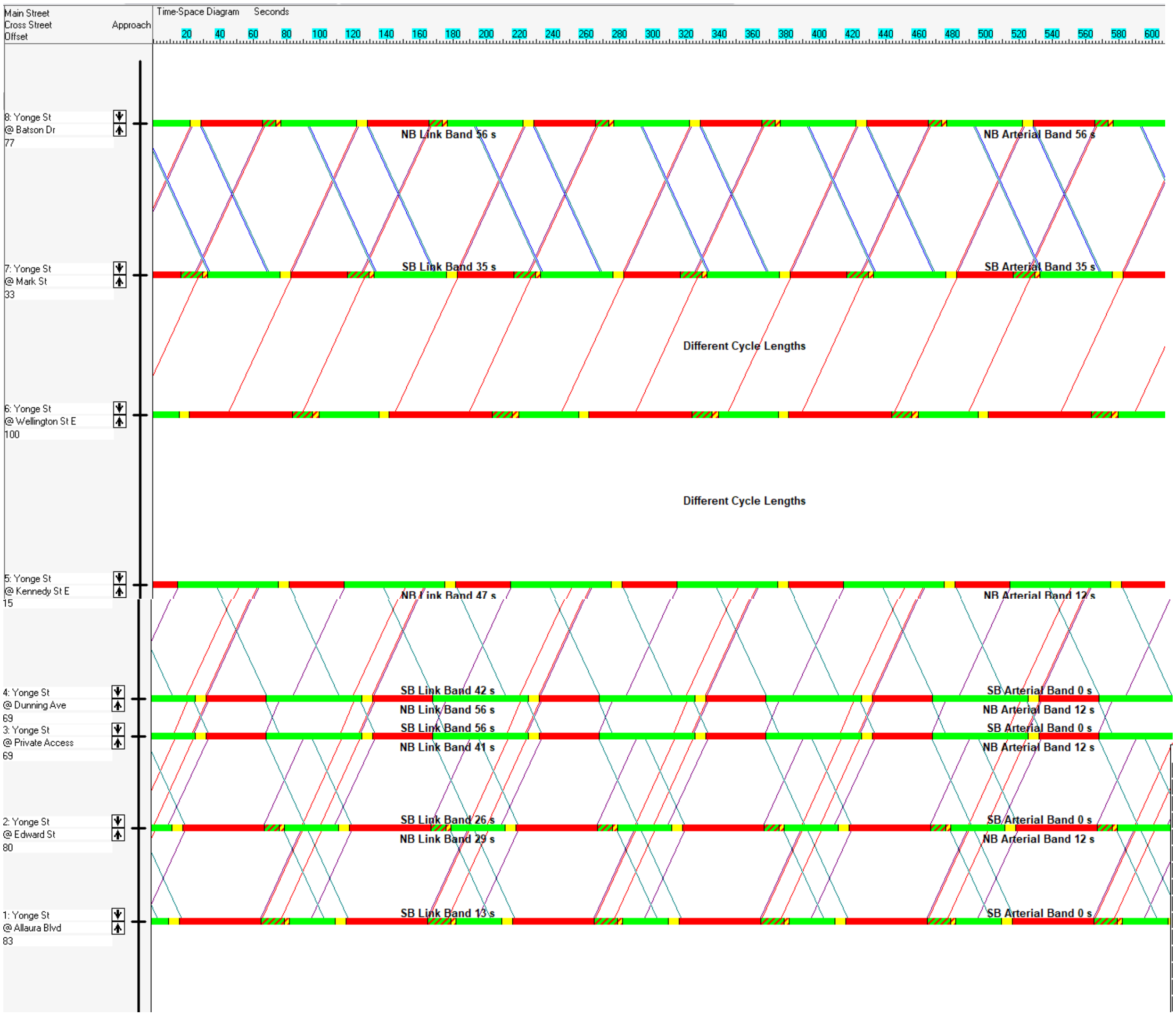


Figure 4-3: PM Peak Time-Space Diagram

Optimization

Based on a review of the delay and green bands, the traffic signal timings were optimized for AM, Mid-day, and PM peak hours, with the following results:

- If optimizing the offsets, the travel time improvements will be approximately 2 or 3s.
- If optimizing offsets and splits, travel time improvements will average 10s for all peak periods.

Following the optimization process, improvements were minor in nature. It appears that the corridor has already been coordinated, and this existing conditions analysis confirms that the implemented improvements continue to be operating well. At this time, current signal timing should be maintained; however, operations should be consistently reviewed to ensure signal coordination is optimized.

4.2 Safety Review

The top ten intersections with the highest number of collisions recorded were chosen for analysis based on the Town of Aurora's 2014-2017 Traffic Accident Heat Map.

It should be noted that the intersection of Yonge Street and Wellington Street is not within the Town's jurisdiction and as a result was not reviewed from a safety perspective. However, an operational review of the intersection is included, and any deficiencies will be discussed through this effort, along with opportunities for improvements which may also enhance safety at this location. The collision data was reviewed and summarized with respect to the following major collision characteristics:

- Total number of collisions at each intersection
- Collisions by impact type and driver action
- Collisions by severity
- External factors
    - Temporal distribution (by year, season / month, and time of day)
    - Driving conditions (road surface, light and weather conditions)

4.2.1 Collision Totals by Intersection

The number of collisions observed at each intersection are shown in **Figure 4-4**.

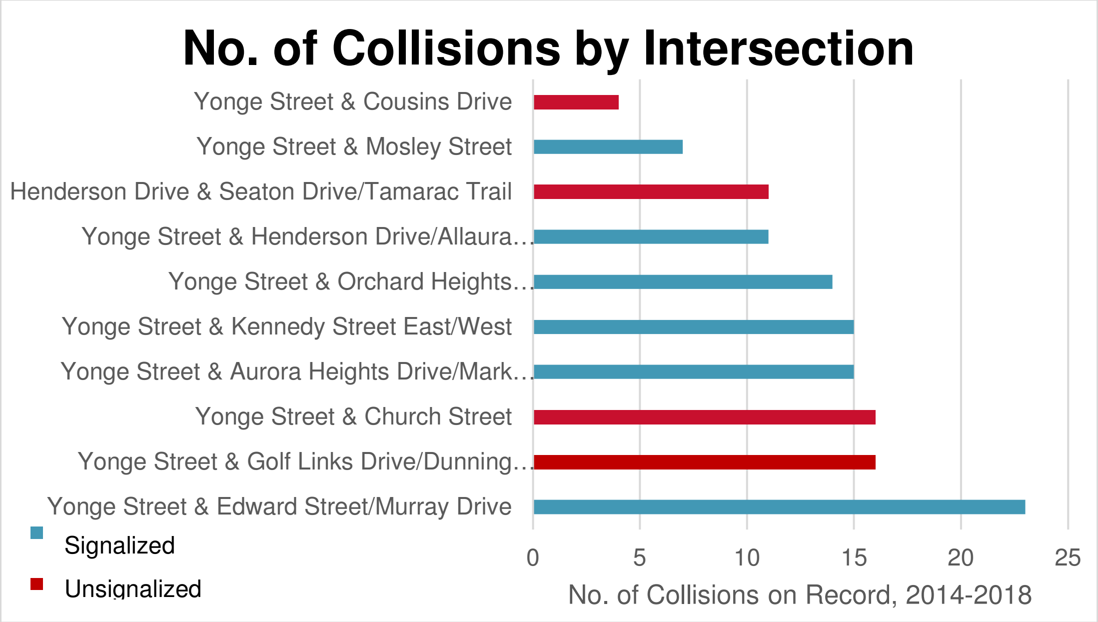


Figure 4-4: Collisions by Intersection

Of the top 10 intersections, the highest number of collisions occurred at Yonge Street & Edward Street/Murray Drive, followed by Yonge Street & Golf Links Drive/Dunning Avenue and Yonge Street & Church Street.

4.2.2 Collisions by Impact Type and Driver Action

An examination of the impact type at specific locations may lead to potential identification of geometric or other location specific conditions. The following section provides an overview of impact type definitions and a summary of the available data.

Impact Type Definitions

Turning movement collisions occur when two vehicles approaching from opposite directions collide as a result of at least one vehicle attempting to make a left or U-turn in front of the opposing vehicle. This is the predominant type of collision observed amongst the 10 shortlisted intersections. Common causes of turning movement collisions may be insufficient vehicle clearance intervals through the intersections or obstruction of sightlines. Potential countermeasures include increasing vehicle clearance times, improving sight-lines and providing traffic signal coordination along a corridor.

Rear-end collisions can occur when a leading vehicle makes a sudden or unexpected stop causing the following vehicle to collide, or when a following vehicle is travelling too closely to the leading vehicle. Possible causes for sudden stops include pedestrian crossings, multiple or closely spaced driveway accesses to adjacent land uses, high number of turning movements, signage/traffic control visibility, non-standard amber times, and slippery road conditions. Safety enhancements may include improved signage and lighting, access management, turn prohibitions etc.

Angle collisions occur when who vehicles approaching at an angle from non-opposing directions (i.e. not a right-angle crash) collide, often due to failing to obey stop/yield signs, running a red light etc.

Single Motor Vehicle (SMV) collisions may include run-off-road and roll-over crashes, as well as collisions with pedestrians, cyclists, animals, roadside objects or debris on the road right of way.

Approaching collisions occur when one vehicle is proceeding through the intersection and collides with another vehicle. Possible causes for this type of collision are improper turns (i.e. an unsafe left turn) or slippery road conditions (i.e. slipping into the intersection).

Sideswipe collisions occur when two vehicles are driving next to one another in the same direction and the sides of two vehicles contact one another. Possible causes for sideswipe collisions include changing lanes, merging, distracted driving, or failure to check blind-spots.

Data Summary by Impact Type and Driver Action

Table 4-5 shows the different types of collisions that have occurred at the 10 shortlisted intersections within the Town. Turning movement and rear-end collisions were the most frequently occurring intersection-collision types, followed by angle and single motor vehicle (SMV) collisions. The top two to three collisions by type and driver action are emphasized at each intersection with **bold font**.

Table 4-5: Total Collisions at Top 10 Intersections by Impact Type and Driver Action

Impact Type	Collisions	%	Driver Action	Collisions	%
Approaching	2	2%	Disobeyed Traffic Control	13	11%
Turning Movement	**38**	**31%**	Driving Properly	9	7%
Angle	**17**	**14%**	**Failed to Yield Right-of-Way**	**35**	**29%**
Rear End	**38**	**31%**	**Following too Close**	**21**	**17%**
SMV	12	10%	Improper Turn	12	10%
Sideswipe	6	5%	Speed too Fast for Conditions	4	3%
Other / Unknown	2	2%	Exceeding Speed Limit	3	2%
TOTAL	121	100%	Improper Lane Change	4	3%
			Lost Control	12	10%
			Other	8	7%
			TOTAL	121	100%

To understand if there are any location specific factors influencing specific types of collisions, a breakdown by location is provided in **Table 4-6**. This table only include collisions where the impact type is known (Blank and N/A records have been excluded). In addition, statistical significance testing was undertaken using the Binomial Test to identify locations where impact types are likely overrepresented compared to the entire data set (**Table 4-5**).

Table 4-6: Number of Collisions by Impact Type and Driver Action

Intersection	Impact Type	Collisions	%	Driver Action	Collisions	%
Yonge Street and Kennedy Street	Approaching	0	0%	Disobeyed Traffic Control	2	13%
	Turning Movement	**7**	**47%**	Driving Properly	0	0%
	Angle	**4**	**27%**	**Failed to Yield Right-of-Way**	**7**	**47%**
	Rear End	**3**	**20%**	Following too Close	0	0%
	SMV	1	7%	Improper Turn	2	13%
	Sideswipe	0	0%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	1	7%
	TOTAL	15	100%	Improper Lane Change	2	13%
				Lost Control	0	0%
				Other	1	7%
				TOTAL	15	100%
Yonge Street and Golf Links Drive / Dunning Avenue	Approaching	0	0%	Disobeyed Traffic Control	2	13%
	Turning Movement	**3**	**19%**	**Driving Properly**	**3**	**19%**
	Angle	**3**	**19%**	**Failed to Yield Right-of-Way**	**4**	**25%**
	Rear End	**7**	**44%**	**Following too Close**	**4**	**25%**
	SMV	2	13%	Improper Turn	1	6%
	Sideswipe	1	6%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	16	100%	Improper Lane Change	1	6%
				Lost Control	1	6%
				Other	0	0%
				TOTAL	16	100%
Yonge Street and Murray Drive / Edward Street	Approaching	1	4%	**Disobeyed Traffic Control**	**5**	**22%**
	Turning Movement	**9**	**39%**	Driving Properly	1	4%
	Angle	**5**	**22%**	**Failed to Yield Right-of-Way**	**7**	**30%**
	Rear End	**6**	**26%**	**Following too Close**	**4**	**17%**
	SMV	2	9%	Improper Turn	2	9%
	Sideswipe	0	0%	Speed too Fast for Conditions	1	4%
	Other / Unknown	0	0%	Exceeding Speed Limit	1	4%
	TOTAL	23	100%	Improper Lane Change	0	0%
				Lost Control	2	9%
				Other	0	0%
				TOTAL	23	100%
Yonge Street and Henderson Drive / Allaura Boulevard	Approaching	0	0%	Disobeyed Traffic Control	1	8%
	Turning Movement	**6**	**50%**	Driving Properly	0	0%
	Angle	1	8%	**Failed to Yield Right-of-Way**	**5**	**42%**
	Rear End	**3**	**25%**	Following too Close	1	8%
	SMV	2	17%	**Improper Turn**	**2**	**17%**
	Sideswipe	0	0%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	12	100%	Improper Lane Change	0	0%
				Lost Control	**2**	**17%**
				Other	1	8%
				TOTAL	12	100%
Yonge Street and Church Street	Approaching	0	0%	Disobeyed Traffic Control	0	0%
	Turning Movement	**3**	**20%**	Driving Properly	1	7%
	Angle	0	0%	**Failed to Yield Right-of-Way**	**4**	**27%**
	Rear End	**7**	**47%**	**Following too Close**	**3**	**20%**
	SMV	2	13%	Improper Turn	0	0%
	Sideswipe	2	13%	Speed too Fast for Conditions	2	13%
	Other / Unknown	1	7%	Exceeding Speed Limit	1	7%
	TOTAL	15	100%	Improper Lane Change	0	0%
				Lost Control	2	13%
				Other	2	13%
				TOTAL	15	100%

Intersection	Impact Type	Collisions	%	Driver Action	Collisions	%
Yonge Street and Orchard Heights Boulevard / Batson Drive	Approaching	0	0%	Disobeyed Traffic Control	0	0%
	Turning Movement	1	7%	Driving Properly	1	7%
	Angle	0	0%	**Failed to Yield Right-of-Way**	**3**	**21%**
	Rear End	**5**	**36%**	**Following too Close**	**4**	**29%**
	SMV*	**6**	**43%**	**Improper Turn**	**3**	**21%**
	Sideswipe	1	7%	Speed too Fast for Conditions	0	0%
	Other / Unknown	1	7%	Exceeding Speed Limit	0	0%
	TOTAL	14	100%	Improper Lane Change	1	7%
				Lost Control	1	7%
***Over-Represented**				Other	1	7%
				TOTAL	14	100%
Yonge Street and Aurora Heights Drive / Mark Street	Approaching	1	7%	Disobeyed Traffic Control	2	13%
	Turning	**5**	**33%**	Driving Properly	2	13%
	Movement	1	7%	Failed to Yield Right-of-Way	1	7%
	Angle	**5**	**33%**	**Following too Close**	**3**	**20%**
	Rear End	1	7%	Improper Turn	0	0%
	SMV	2	13%	Speed too Fast for Conditions	1	7%
	Sideswipe	0	0%	Exceeding Speed Limit	0	0%
	Other / Unknown	15	100%	Improper Lane Change	0	0%
	TOTAL			**Lost Control**	**3**	**20%**
				Other	**3**	**20%**
				TOTAL	15	100%
Henderson Drive and Seaton Drive / Tamarac Trail	Approaching	0	0%	Disobeyed Traffic Control	1	9%
	Turning	**4**	**36%**	Driving Properly	1	9%
	Movement	**3**	**27%**	**Failed to Yield Right-of-Way**	**4**	**36%**
	Angle	2	18%	**Following too Close**	**2**	**18%**
	Rear End	2	18%	**Improper Turn**	**2**	**18%**
	SMV	0	0%	Speed too Fast for Conditions	0	0%
	Sideswipe	0	0%	Exceeding Speed Limit	0	0%
	Other / Unknown	11	100%	Improper Lane Change	0	0%
	TOTAL			Lost Control	1	9%
				Other	0	0%
				TOTAL	11	100%

The following observations are noted:

1. **Turning Movement and Rear-end Collisions** occur frequently throughout the top 10 intersections (9 out of 10 are along Yonge Street)
2. **Failing to yield right-of-way** and **following too close** are the top two reported driver actions, and these correspond with turning movement, angle, and rear-end collisions.
3. **Yonge Street and Kennedy Street** has a high number of turning movement impacts where the driver failed to yield right-of-way. This may be a result of the poor sightlines associated with opposing shared thru-left lanes.
4. **Yonge Street and Murray Drive/Edward Street** has a high number of vehicular collisions in total, which may warrant further investigation. There are a number of driveway accesses on all quadrants of the intersection which could contribute to rear-end collisions, along with driver actions such as following to close.
5. **Yonge Street and Orchard Heights Boulevard/Batson Drive** - the Binomial Test indicated that SMV collisions at the intersection of were found to be disproportionately high. The majority of SMV collisions occurred under non-daylight lighting conditions and the main driver actions noted for collisions at this intersection include failing to yield right-of-way, following too close, or making improper turns. 50 percent of SMV collisions at this intersection involved a pedestrian. Field observations are recommended to assess street lighting during non-daylight hours, pedestrian crossing markings, and signage.
6. **Yonge Street/Church Street** exhibits a high number of rear-end collisions, most of which occurred in the through lanes and could have been due to vehicles making southbound left or northbound right turns from Yonge Street to Church Street. In conjunction, driver actions noted include following too close, speeding, and losing control of the vehicle.

Based the high proportion of SMV collisions, particularly at Yonge Street and Orchard Heights Boulevard/Batson Drive, SMV collision data were assessed in further detail and summarized in **Figure 4-5.**

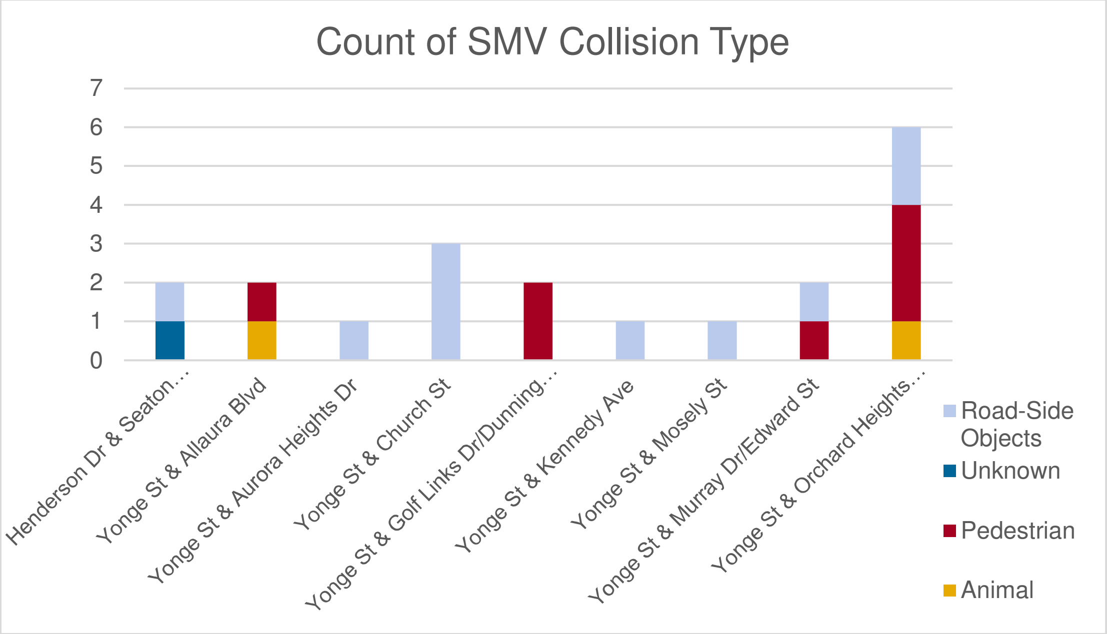


Figure 4-5: SMV Collision Type

The following observations are noted:

1. Of the 20 SMV collisions, 6 occurred at Yonge Street & Orchard Heights Drive/Batson Drive.
2. 3 of those 6 were pedestrian-cyclist collisions and we recommend further investigation at this intersection.
3. 2 collisions with pedestrians or cyclists occurred at Yonge St & Golf Links Drive/Dunning Avenue, and further investigations should be considered there as well.
4. 3 collisions with road-side objects occurred at Yonge and Church Street. Further investigations should be considered.

4.3 Collisions by Severity

A review of historical collision severity can provide an indication of unsafe conditions which may lead to loss of life or personal injury. Where severe collisions appear to occur more frequently relative to the other high collision locations in Town, further investigation is warranted and improvements to geometric design, regulation and signage must be considered to prevent or mitigate future incidents.

Of the 133 total collisions recorded in the historical collision data at the top 10 intersections between 2014 and 2018, the intersection of Yonge Street & Golf Links Drive / Dunning Avenue had the most severe collisions (5), followed by Yonge Street & Church Street with 4 severe collisions. The collision severity is shown in **Figure 4-6.**

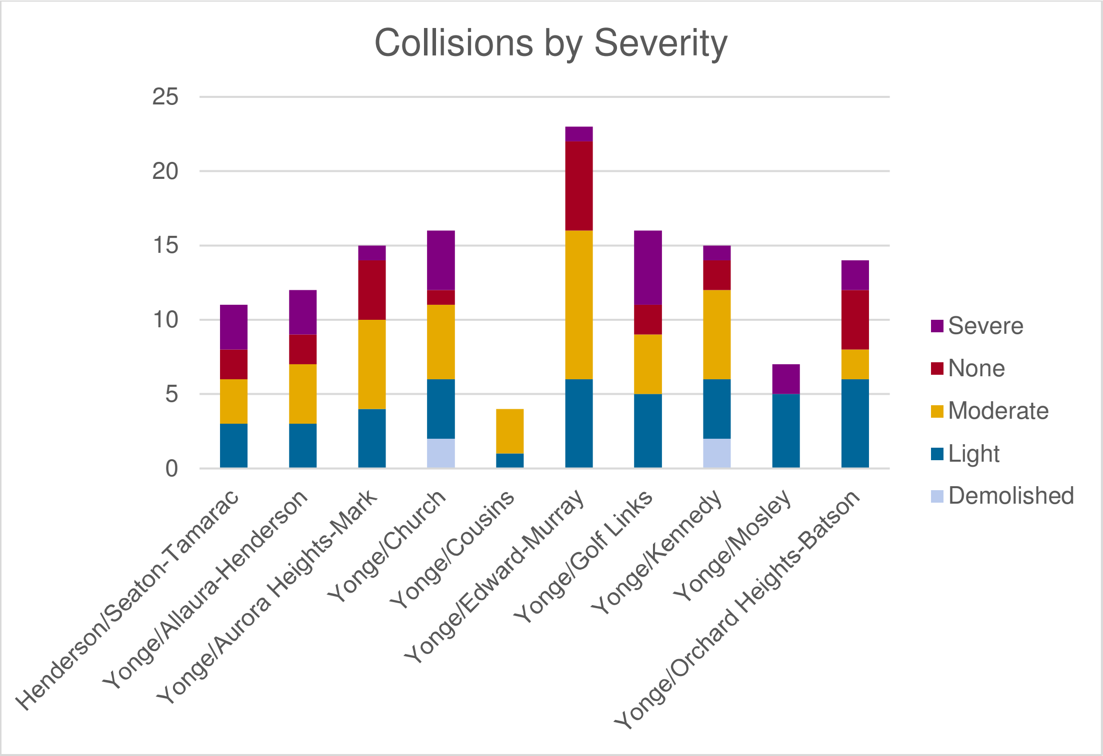


Figure 4-6: Collision by Severity

Both intersections, Yonge Street & Golf Links Drive / Dunning Avenue and Yonge Street & Church Street are unsignalized. Field observations are recommended to assess any need for possible improvements to geometric design, signage, or signalization.

Of the 133 total collisions recorded in the historical collision data from 2014, 108 collisions were recorded as property damage only (P.D. only), 25 collisions resulted in non-fatal injuries, and zero collisions resulted in a fatality. The Injury Type / Damage Classification is shown in **Figure 4-7**.

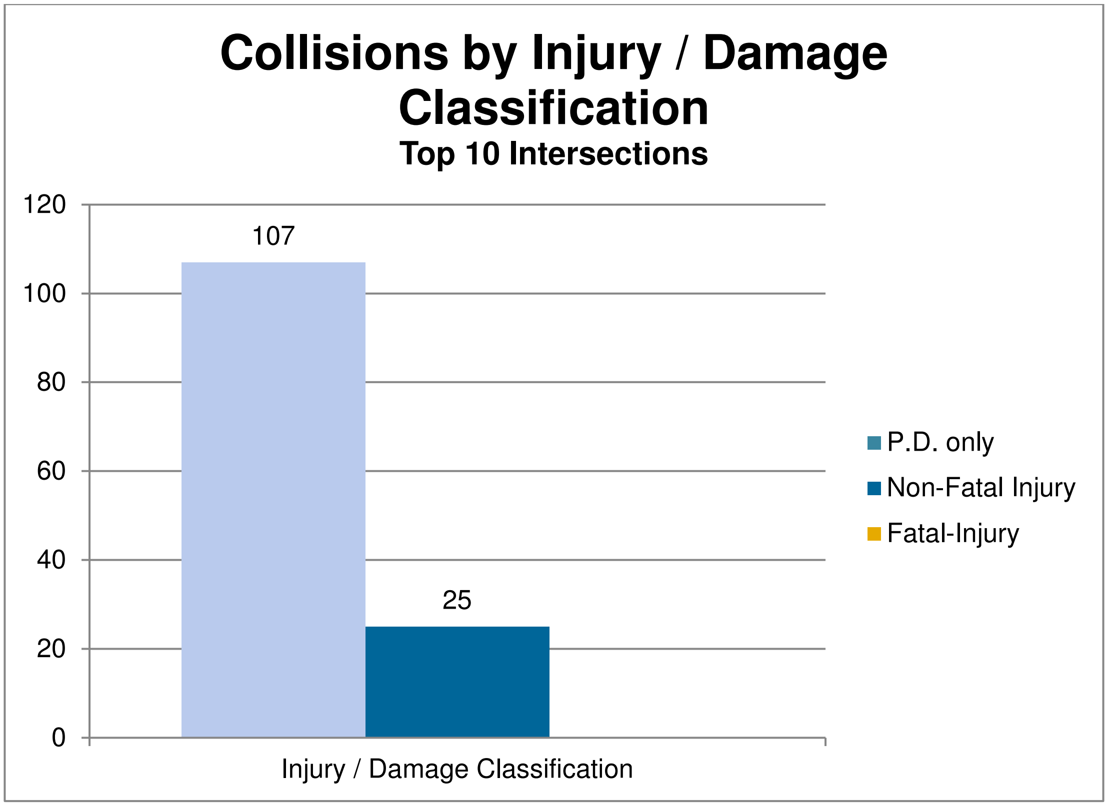


Figure 4-7: collisions by Injury / Damage Classification

4.4 External Factors

External factors include temporal distribution such as yearly variances, seasonal, and time of day. Driving conditions are also identified in this section, to provide an understanding of road surface, light, and weather conditions. Should the data indicate any statistical outliers, further investigation may be warranted.

4.4.1 Temporal Distribution

As shown in **Figure 4-8**, the number of collisions spiked in 2017 with 62 collisions, doubling the number of collisions in 2016. Overall, there were more collisions in the months of March, April, July, and September to December than the previous years; the majority of which occurred on clear days. **Based solely on this desktop review, we cannot comment on whether any external factors impacted the spike in collisions in 2017.**

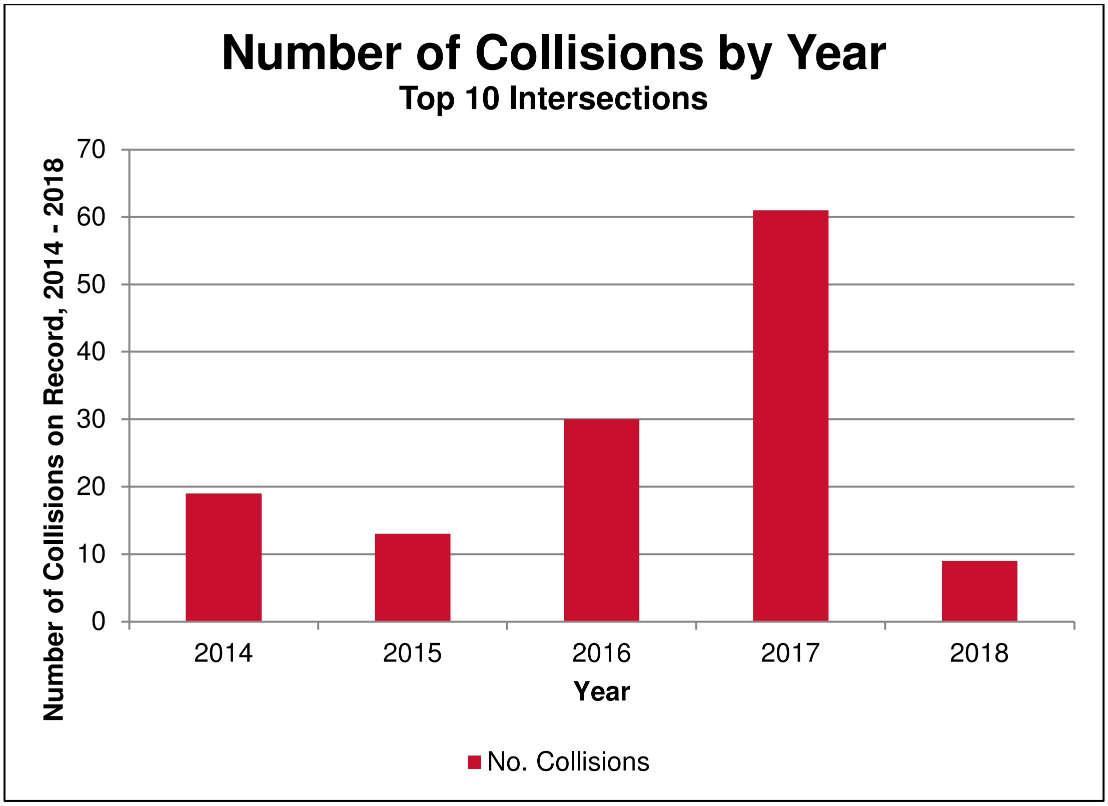


Figure 4-8: Number of Collisions by Year

Figure 4-9 illustrates that almost half of all recorded collisions occurred during the winter months from December to March. Most of the collisions occurred between 12 noon and 6 PM (**Figure 4-10**) which is generally proportional to the times of day with higher traffic volumes. Seven of the ten intersections with the high collision rates are located between Wellington Street and Industrial Parkway south, spanning parts of the Downtown and South Yonge Street Promenade areas. Because this stretch of road features restaurants, retail, commercial and retail establishments, the increase in collisions may be explain by the increased activity on Yonge Street during the day. Further, Dr. GW Williams Secondary School is located just south of Golf Links Drive/Dunning Avenue and could also contribute to the spike in number of collisions after 3 PM.

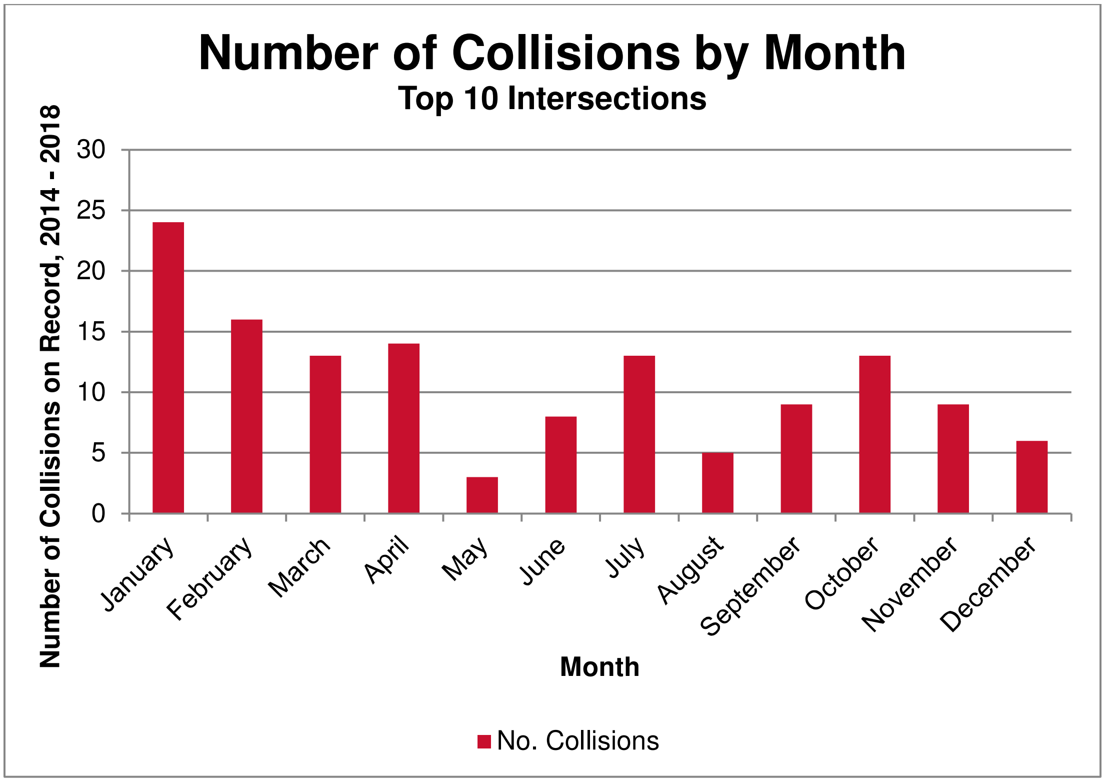


Figure 4-9: Collisions by Months

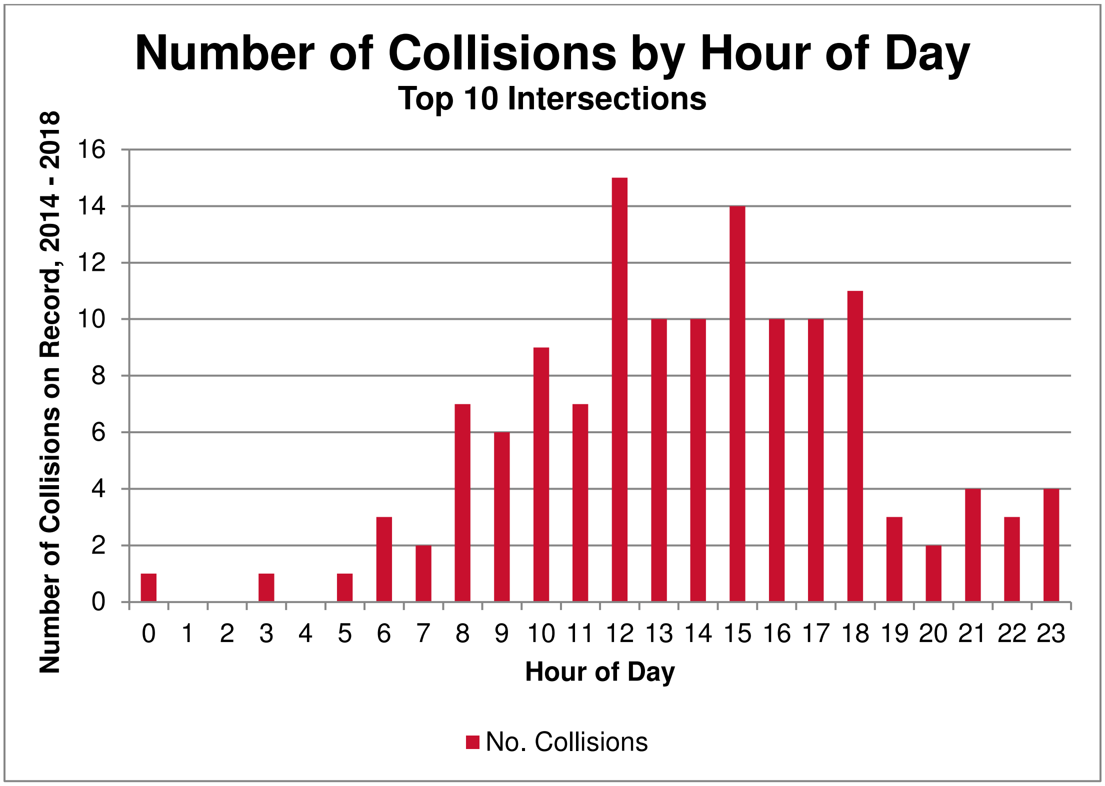


Figure 4-10: Collisions by Time of Day

4.4.2 Driving Conditions

As shown in **Figure 4-11**, collisions occurred mostly during the daytime, while less than one-fourth of the collisions were reported to occur in conditions with lower light levels including dusk, dawn, and during nighttime. This appears in line with traffic volumes at these times of day and thus **in general, light conditions do not appear to be a factor at the top 10 intersections**.

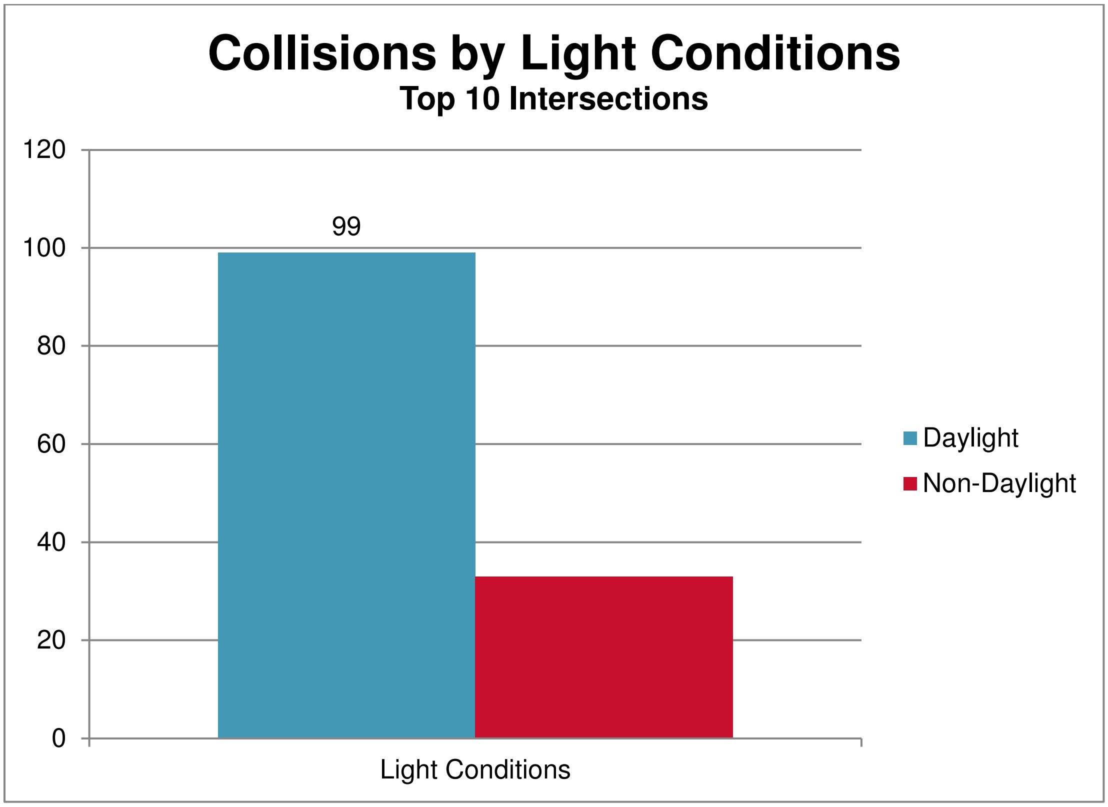


Figure 4-11: Collisions by Light Conditions

Figure 4-12 illustrates the number of collisions by road surface conditions. The majority of the collisions at the 10 locations occurred when the surface conditions of the road were dry. 20% of the collisions took place in wet road surface conditions while a combined 14% of the collisions occurred in wintry road surface conditions with packed snow, loose snow, or slush on the ground.

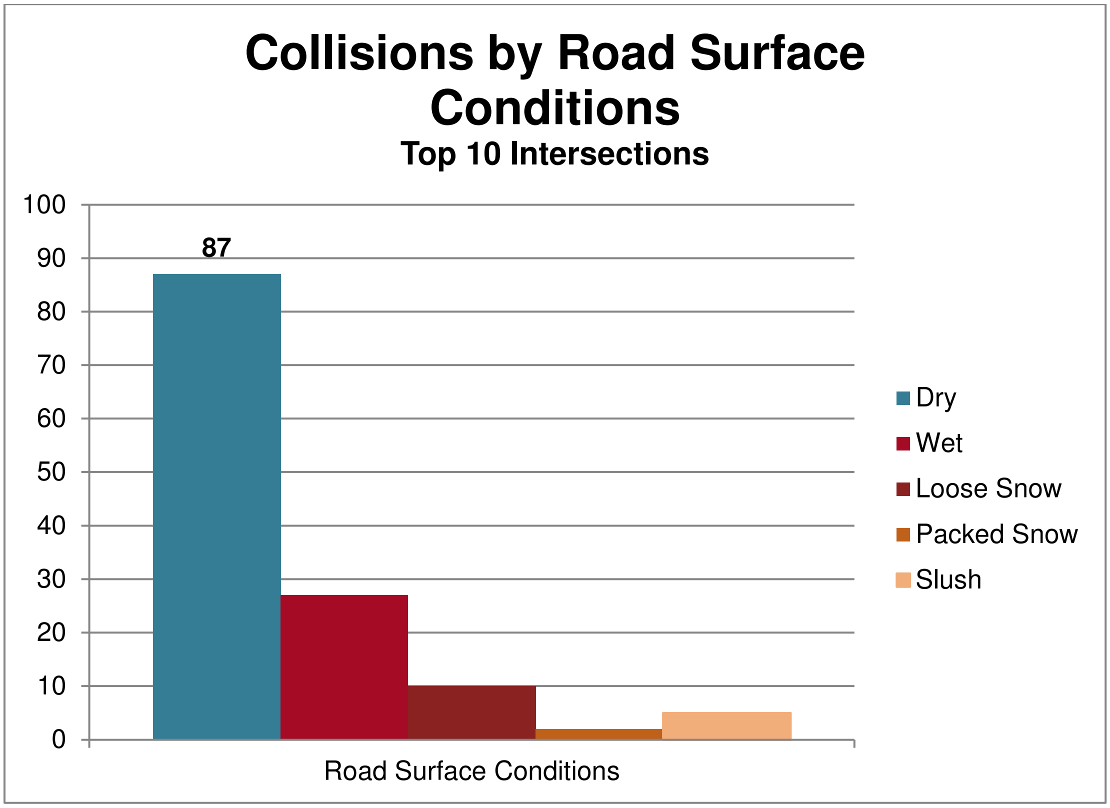


Figure 4-12: Collision by Road Surface Conditions

A comparison was undertaken to determine whether accidents occurring during a specific road surface condition happens more frequently at any particular intersection. Based on **Figure 4-13**, **there does not seem to be a trend indicating a high proportion of road surface condition collisions at a certain intersection.**

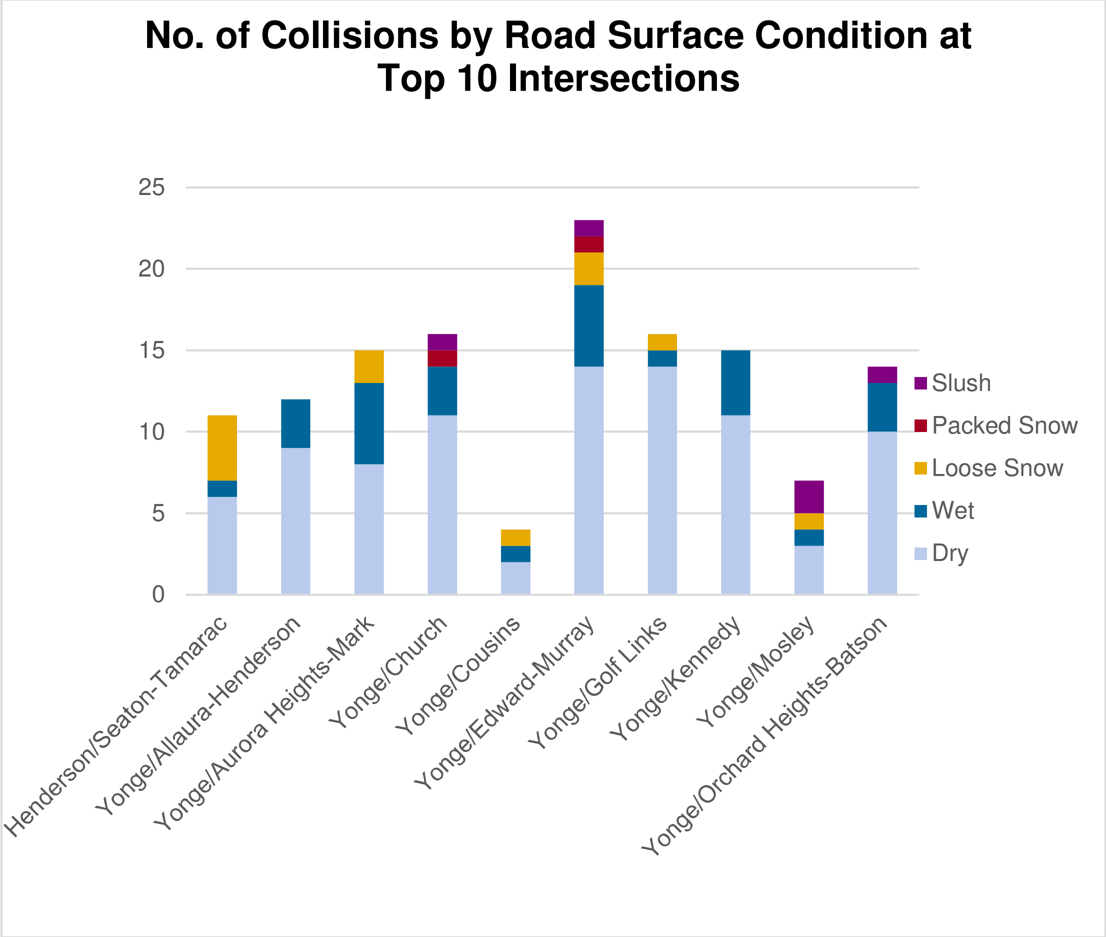


Figure 4-13: Collisions by Road Surface Condition at Top 10 Intersections

The weather conditions were reported to be clear for 80% of all collisions and raining or snowing for 20% of the collisions. **Figure 4-14** illustrates the number of collisions by weather conditions.

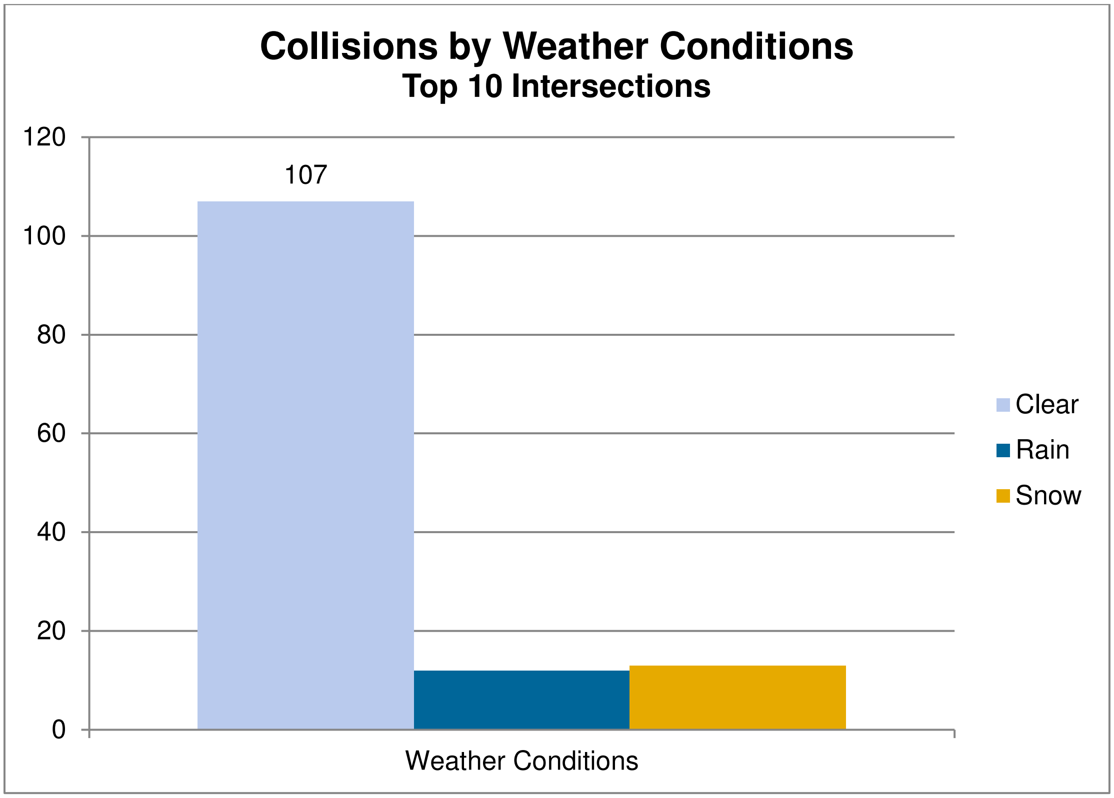


Figure 4-14: Collisions by Weather Conditions

Although many collisions occurred in the winter months, driving conditions do not appear to be a major contributing factor to the observed collisions at the 10 short-listed intersections in the Town since majority of them occurred in the daytime, with clear weather and dry road surface. **Figure 4-15** and **Figure 4-16** compare the number of collisions by weather conditions at each intersection for December to March and April to November, respectively.

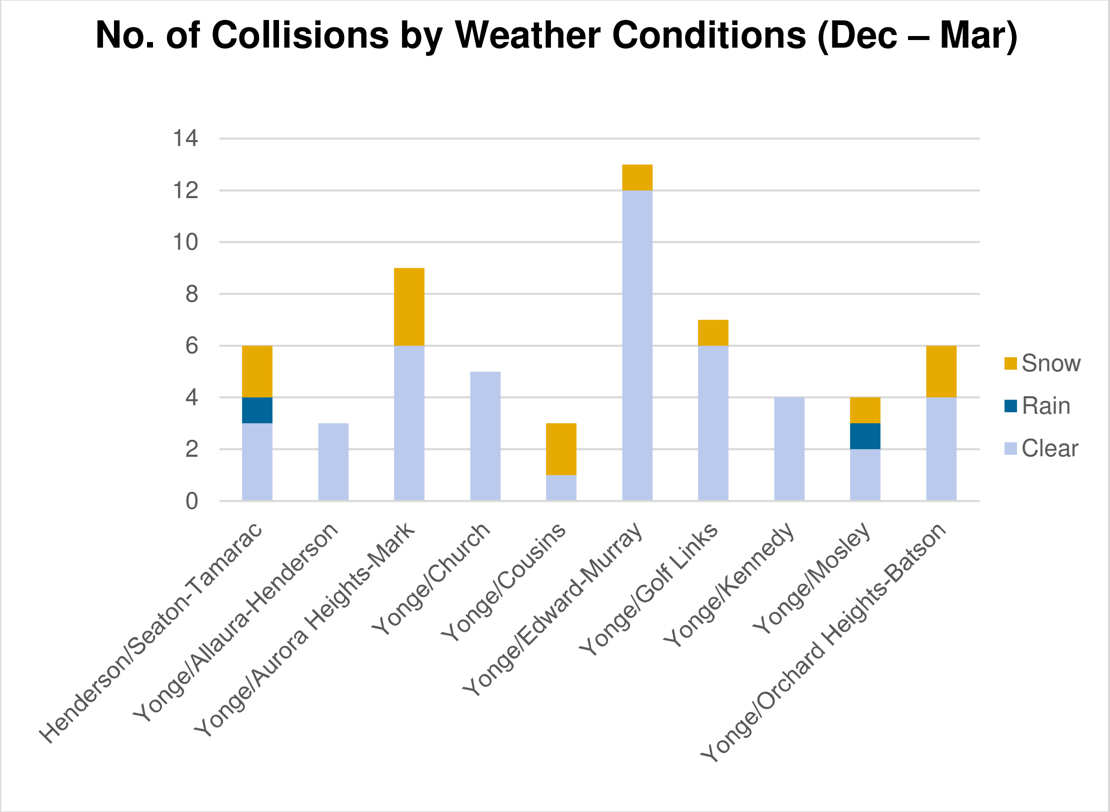


Figure 4-15: Collisions by Weather Conditions (December to March)

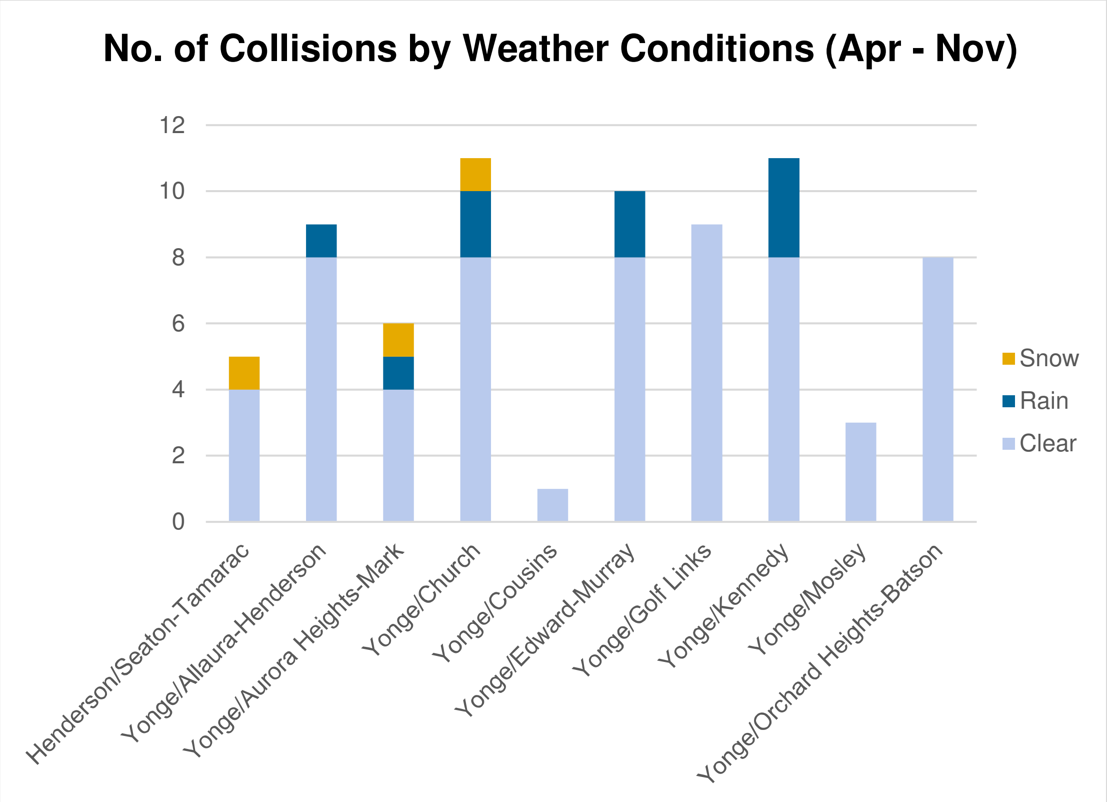


Figure 4-16: Collisions by Weather Conditions (April to November)

4.5 Site Visits

Based on the number of accidents, accident type, and driver actions, five of ten intersections were identified for field visits in order to determine if there are opportunities for safety improvements and the following observations and recommendations were provided. Details on the collision analysis and field observations are provided in the *Collision Analysis Memorandum,* provided in **Appendix B**. The five intersections from north to south are:

- Yonge Street & Orchard Heights Boulevard/Batson Drive
- Yonge Street & Church Street
- Yonge Street & Kennedy Street
- Yonge Street & Golf Links Drive/Dunning Avenue
- Yonge Street & Murray Drive/Edward Street

Headlight Consulting Inc. was retained and conducted the field visits on Tuesday, August 14, 2018. Yonge Street and Murray Drive/Edward Street was the only intersection not under construction at the time of the visit.

Figure 4-17: Town of Aurora Construction Notice illustrates an image of a construction notice that was posted on the side of the road. As there were lane and street closures, this meant that the field visit was conducted under non-typical traffic conditions.

AURORA

ENGINEERING AND CAPITAL DELIVERY DIVISION
Phone: 905-727-1375
Email: engineering@aurora.ca
aurora.ca

TOWN OF AURORA

Thank you for your patience as we work to improve infrastructure.

ROADWAY REHABILITATION OF YONGE STREET (FROM ORCHARD HEIGHTS BOULEVARD TO GOLF LINKS DRIVE)

Contract #: 2018-24-PDS-ENG Contractor: Furfari Paving Co. Ltd.

ESTIMATED COMPLETION DATE: OCTOBER, 2018

ALL BUSINESSES REMAIN OPEN DURING CONSTRUCTION

AURORA

Figure 4-17: Town of Aurora Construction Notice

4.5.1 Intersection Observations

Yonge Street and Orchard Heights Boulevard/Batson Drive

There were three pedestrian collisions at this intersection and all of them involved left turning vehicles.

Recommendation: Smaller curb radii, particularly on Batson Drive, be considered, as well as converting the signal timing from protected/permissive to protected only left-turns from Yonge Street.

Figure 4-18: Yonge Street and Orchard Heights Boulevard/Batson Drive intersection

Yonge Street and Church Street

This intersection was the only unsignalized and the only three-legged intersection included in the field visits. The characteristics of this intersection are different from the others in that it feels like a city centre with the Aurora Public Library, and numerous commercial and residential properties close to Yonge Street. Many pedestrians and cyclists were observed in the area with pedestrians observed to be crossing the street at all points in the area. Based on the collision analysis, this intersection exhibits a high number of rear-end collisions, most of which occurred in the through lanes and could have been due to vehicles making southbound left or northbound right turns from Yonge Street to Church Street.

Recommendation: To improve safety at this intersection, consider providing exclusive left-turn lanes. Given the constrained right-of-way, a “road diet” should be considered which will reduce through lanes from four to two. The additional space can be allocated to a two-way centre left-turn lane and the pedestrian realm or cycling facilities.

Figure 4-19: Yonge Street and Church Street intersection

Yonge Street and Kennedy Street

It was noted that there are commercial properties on all four corners of the Yonge Street & Kennedy Street intersection. Three of the four corner commercial properties appear to have been residential homes before being converted to commercial uses, so there are several driveways along Yonge Street that are closer to the signalized intersection than would normally be permitted.

Recommendation: In the long-term, intersection improvements may include closing, consolidating or restricting movements (i.e. right-in, right-out design) at private driveways and adding left-turn lanes on Yonge Street.

Figure 4-20: Yonge Street and Kennedy Street intersection

Yonge Street and Golf Links Drive/Dunning Avenue

The majority of collisions that occurred at this intersection were rear-end, turning movement, and angle. Based on the field observations there were no obvious deficiencies identified at this intersection, other than no sidewalks on the north side of Dunning Avenue.

> Recommendation: Consider signal timing change to protected left-turn only on Yonge Street in the long-term. It was also observed that the curb radii are large; however, the curbs appear to have been recently constructed.

Figure 4-21: Yonge Street and Golf Links Drive/Dunning Avenue intersection

Yonge Street and Murray Drive/Edward Street

This intersection had the most recorded collisions; however, six of the collisions attributed to this intersection refer to collisions that that occurred at private driveways and not within the signalized intersection. Based on the field observations, Yonge Street & Murray Drive/Edward Street is a very large intersection with commercial properties on all four corners. There were no apparent deficiencies specific to this intersection.

Figure 4-22: Yonge Street and Murray Drive/Edward Street Intersection

4.5.2 Implementation Opportunities

Smaller Corner Radii

Reducing the radius of the corner curbs on streets (the curb radii) can improve safety. As stated in the City of Toronto Curb Radii Design Guidelines [2, 3], "reductions in curb radii result in reductions in pedestrian crossing distances and pedestrian crossing times". In addition, "reductions in curb radii require vehicles to maneuver at slower speeds". Smaller curb radii also "improves the visibility of a pedestrian in the crosswalk and allows the driver to view a pedestrian in the crosswalk at a more acute angle and from farther away". Vehicle safety is also improved by allowing a right turning vehicle "to have improved visibility of perpendicular traffic". Finally, smaller curb radii also provide for more pedestrian storage space and thus further reducing the probability of a pedestrian-vehicle collision.

According to the February 2017 Design Criteria Manual for Engineering Plans for the Town of Aurora, the road design requirement for the curb radius at intersecting roads

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[2] City of Toronto Curb Radii Design Guidelines, 2016 Transportation Association of Canada Road Safety Engineering Award Submission.

[3] 6.0 Curb Radii Guideline. Version 1.1. June 2017. City of Toronto, Transportation Services.

is 9.0m. It is not clear if this design criteria allows for smaller curb radii or consideration of the frequency of truck turns, lane widths, or the intersection angle. If not, there may be an opportunity for the Town to improve safety by reviewing and updating current standards based on best practices, and constructing intersections with smaller corner radii.

The intersection of Orchard Heights Boulevard/Batson Drive is shown in **Figure 4-23**. The curb radii on Orchard Heights Boulevard are smaller than the curb radii on Batson Drive. Batson Drive stood out during the field visit as having particularly large curb radii.

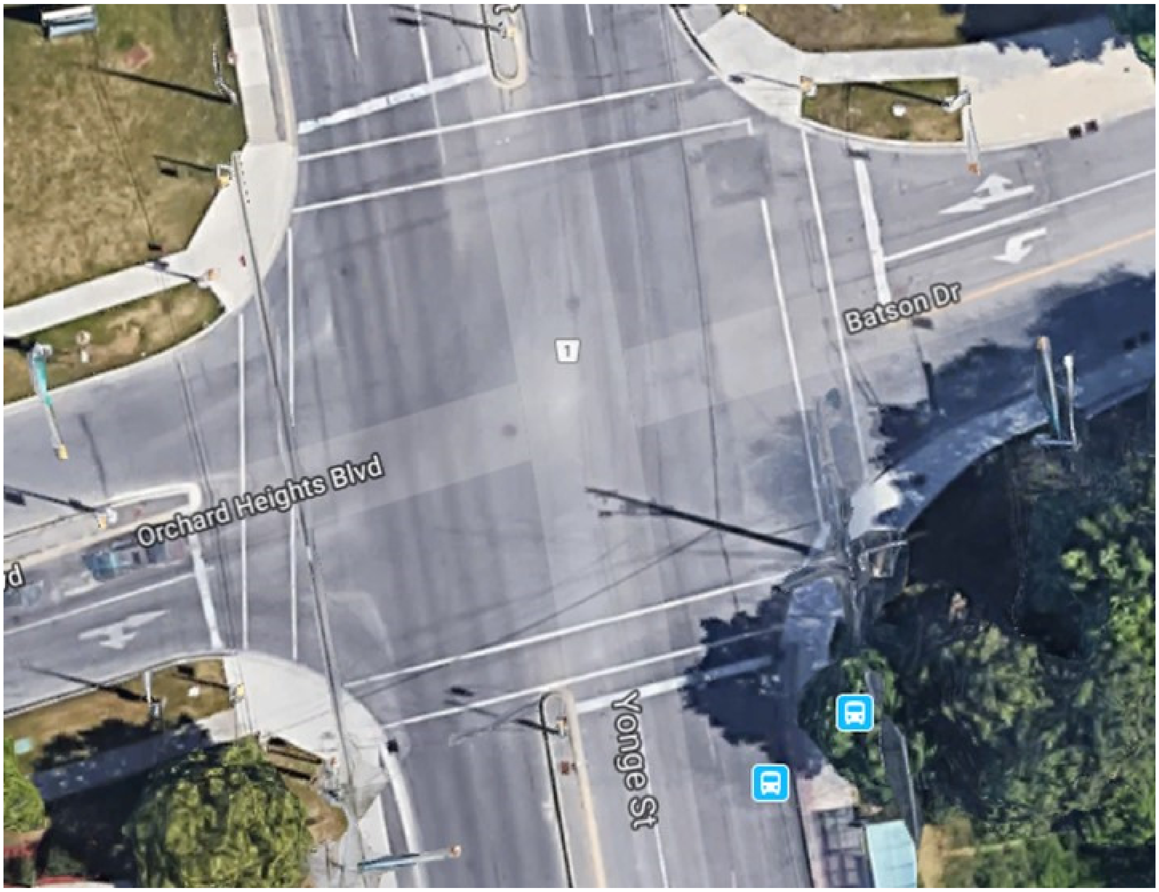

Figure 4-23: Google satellite view of Orchard Heights Boulevard/Batson Drive

Traffic Signal Modifications

Another countermeasure would be converting signal timings from protected/permissive to protected-only left-turns from Yonge Street. The CMF Clearinghouse estimates that angle and left-turn collisions are essentially eliminated by converting to protected-only signal control.[4] Because of the likely reduction in left-turn capacity, it is recommended that the Town consider this modification at locations with low left-turn volumes.

Road Diet

The top five intersections for most collisions spans Yonge Street from Orchard Heights Boulevard/Batson Drive to Murray Drive/Edward Street. Based on the collision analysis it was noted that the most frequent collisions that occurred were turning movement and rear-end. These accidents could be attributed to the fact that most of the road segment along Yonge Street (Aurora Heights Drive/Mark Street to Golf Links Drive/Dunning Avenue) consists of two travel lanes in each direction with no dedicated left turn or right turn lanes. This, coupled with the vast amount of driveways along Yonge Street is problematic because drivers may suddenly slow down to turn, while other drivers may be following too closely, or being distracted.

Exclusive left-turn lanes for driveway access and opposing left-turn lanes at intersections would benefit both traffic operations and safety. However, the constrained right-of-way along Yonge Street through the Aurora Promenade area would not be able to accommodate a fifth lane without significant property acquisition to increase available right-of-way. As such, making these improvements would require a “road diet” reducing the number of through travel lanes from four to two.

Given the potential traffic impacts of a road diet on Yonge Street, further analysis is provided in the following section to assess feasibility and potential impacts.

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[4] Srinivasan, R., F. Council, C. Lyon, F. Gross, N. Lefler, and B. Persaud. "Evaluation of the Safety Effectiveness of Selected Treatments at Urban Signalized Intersections." TRB 87th Annual Meeting Compendium of Papers CD-ROM. Washington, D.C., 2008. Protected/permissive to protected-only left turn phasing

5 Yonge Street Road Diet Analysis

As noted in the previous section, a road diet on Yonge Street through the Downtown of Aurora should be considered to improve operations and safety. Although Yonge Street is under Town jurisdiction for the section of Yonge Street being considered, close coordination with York Region is required particularly at the critical Yonge and Wellington intersection and also to address the implications on the YRT/Viva service on Yonge Street.

5.1 Road Diet Concept

An example of a road diet from 4 lanes to 3 lanes is provided in **Figure 5-1**. A centre two-way left turn lane (TWLTL) provides storage for left-turn movements, while additional space at the existing curbs may be utilized for either bike lanes, additional public realm / sidewalk width, or parking lay-bys depending on the existing pavement width, and the presence of side-streets and the need for the centre TWLTL.

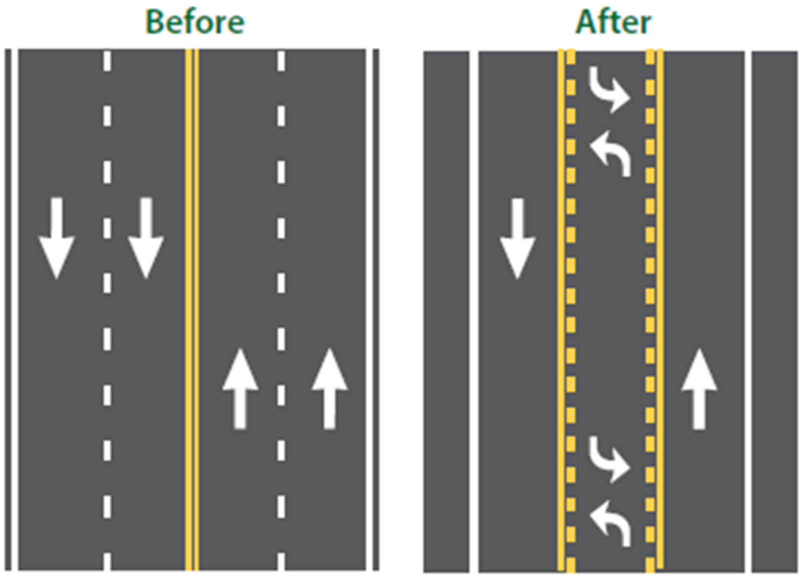


Figure 5-1: Road Diet Example
Source: US DoT Federal Highway Administration, Road Diet Informational Guide November 2014

The analysis in this section is based on the configuration depicted in **Figure 5-1**, assuming the reconfiguration of lanes on Yonge Street from south of Orchard Heights Boulevard/Batson Drive to Golf Links Drive/Dunning Avenue. This section was chosen based on an assessment of the surrounding land use character and driveway frequency. This segment of Yonge Street was identified for analysis purposes only and further study is required to determine the most appropriate section to consider for a road diet.

5.1.1 Regional Traffic Impacts

To assess future traffic conditions, the broader regional impacts were first tested in the York Region EMME travel demand model for 2041 AM peak hour conditions. Screenline traffic conditions in the peak southbound direction across Bathurst Street, Yonge Street, and Bayview Avenue for the Do-Nothing scenario and the Yonge Street Road Diet Scenario are provided in **Table 5-1** and **Table 5-2.**

Table 5-1: Screenline Traffic Volumes – 2041 AM Peak Hour Do-Nothing Scenario

DO NOTHING	Bathurst	Yonge	Bayview	TOTAL
2041 AM Peak Hour SB Volume				
North of St. John's	2,060	1,840	1,410	**5,310**
South of St. John's	1,930	1,090	1,180	**4,200**
North of Wellington	2,160	1,310	1,620	**5,090**
South of Wellington	2,040	1,060	1,830	**4,930**
North of Vandorf/Henderson	2,020	1,270	1,980	**5,270**
V/C Ratio				
North of St. John's	0.86	1.02	0.88	**0.92**
South of St. John's	0.80	0.78	0.74	**0.78**
North of Wellington	0.90	0.94	1.01	**0.94**
South of Wellington	0.85	0.76	0.92	**0.85**
North of Vandorf/Henderson	0.84	0.91	0.99	**0.91**

Table 5-2: Screenline Traffic Volumes – 2041 AM Peak Road Diet Scenario

YONGE ST. ROAD DIET	Bathurst	Yonge	Bayview	TOTAL
2041 AM Peak Hour SB Volume				
North of St. John's	2,070	1,830	1,420	**5,320**
South of St. John's	1,980	900	1,200	**4,080**
North of Wellington	2,190	940	1,650	**4,780**
South of Wellington	2,140	700	1,830	**4,670**
North of Vandorf/Henderson	2,030	1,130	2,010	**5,170**
V/C Ratio				
North of St. John's	0.86	1.02	0.89	**0.92**
South of St. John's	0.83	0.64	0.75	**0.76**
North of Wellington	0.91	1.04	1.03	**0.98**
South of Wellington	0.89	0.78	0.92	**0.88**
North of Vandorf/Henderson	0.85	0.81	1.01	**0.89**

Based on the regional traffic assessment, the road diet does not appear to have significant impacts on network wide congestion. Bathurst Street and Bayview Avenue carry slightly more traffic, but the overall congestion levels are similar between both scenarios. **Figure 5-2** and **Figure 5-3** illustrates the volume/capacity for both scenarios, while **Figure 5-4** illustrates the difference in traffic volumes between them.

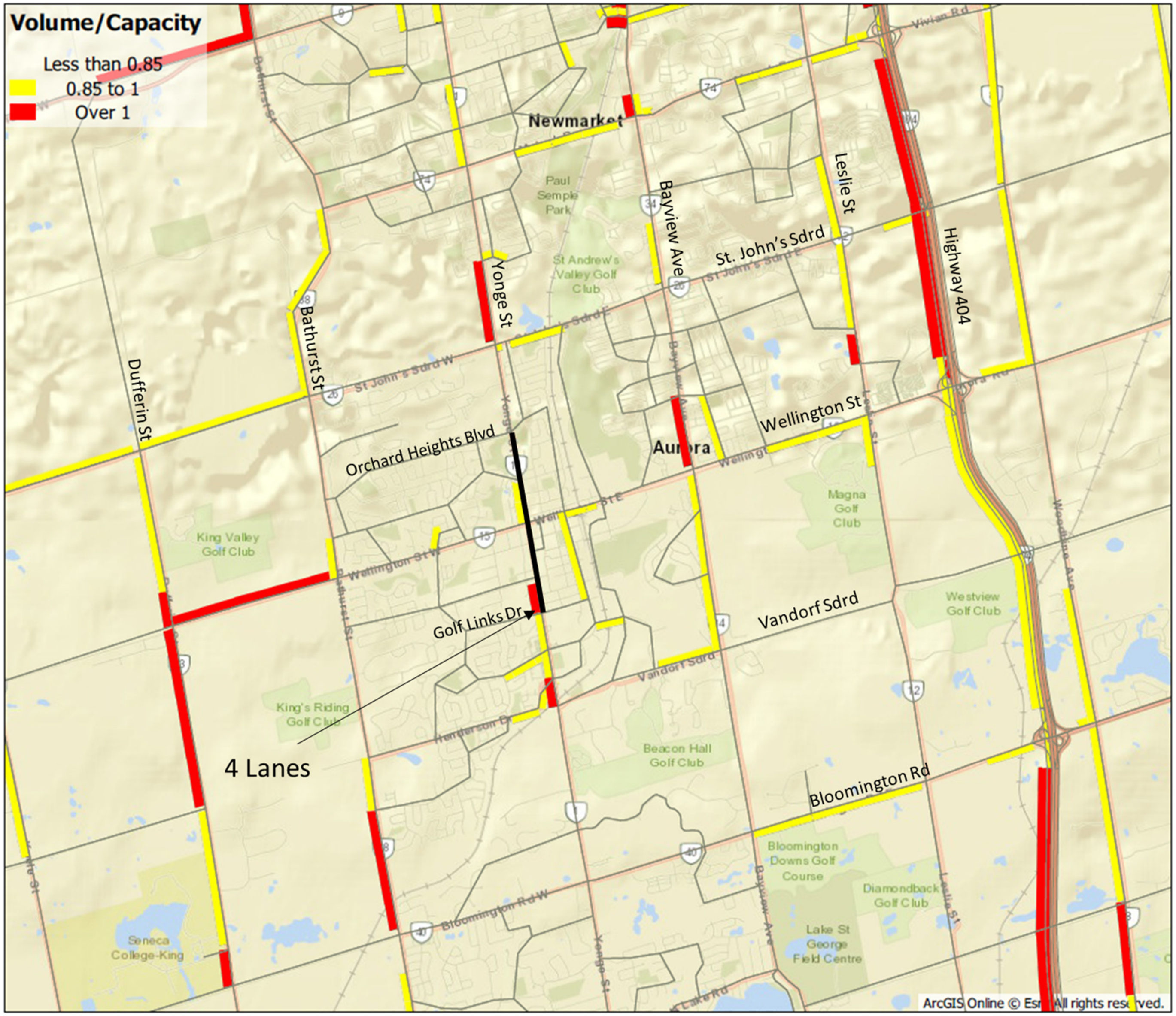


Figure 5-2: 2041 AM Peak Hour DO NOTHING Scenario

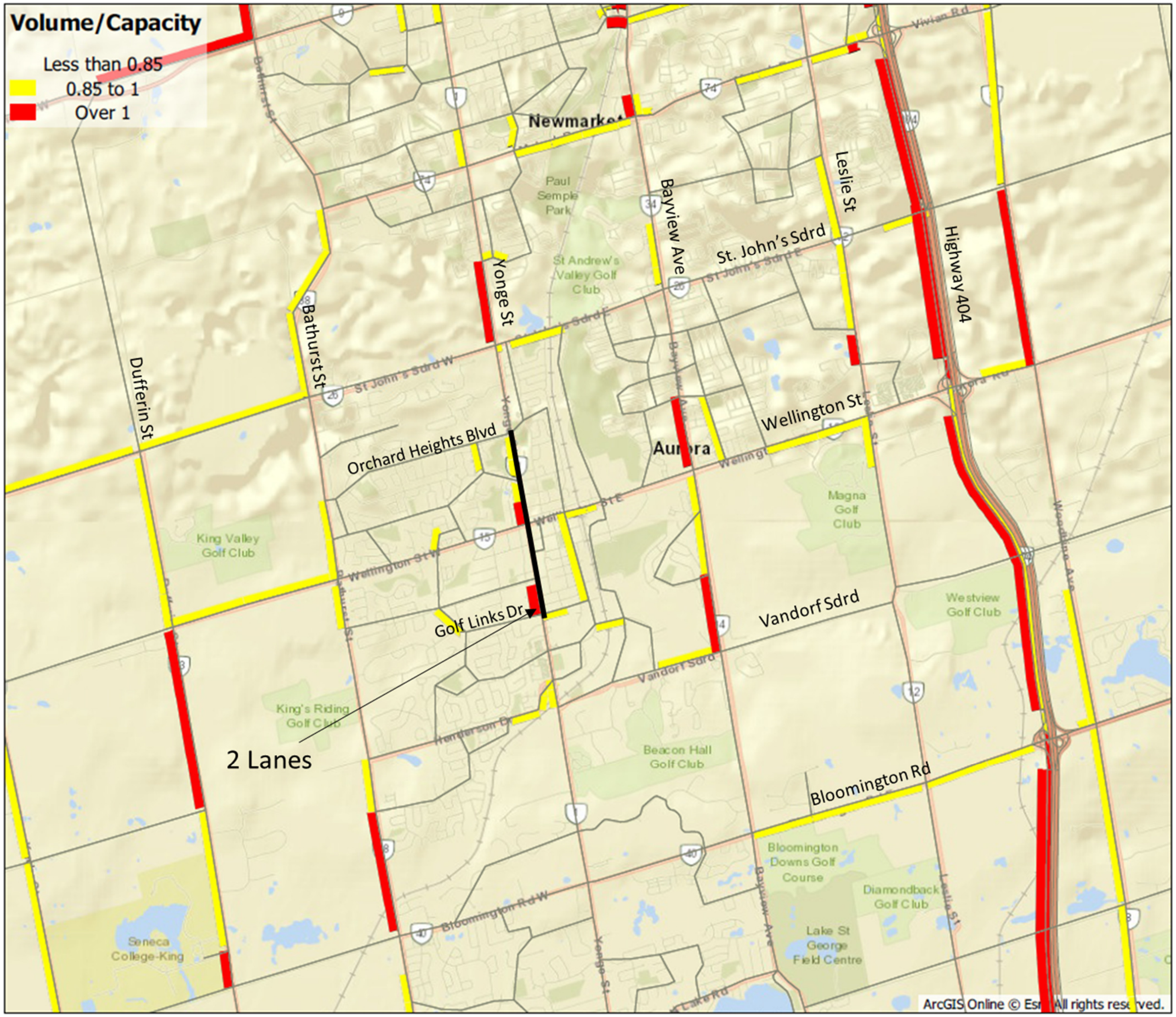


Figure 5-3: 2041 AM Peak Hour ROAD DIET Scenario

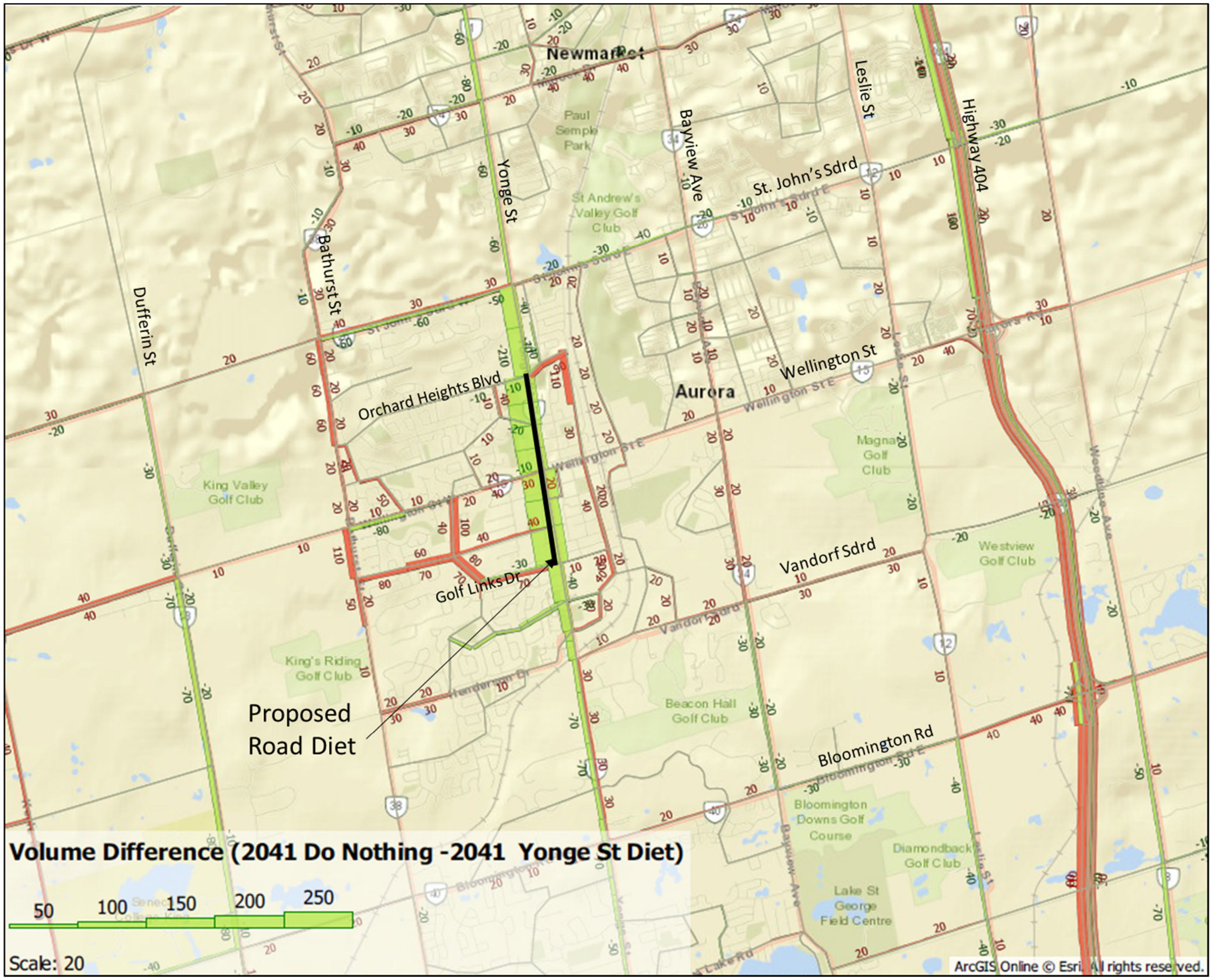


Figure 5-4: 2041 AM: Volume Difference Plot

5.1.2 Yonge-Wellington Intersection Capacity

The intersection of Yonge Street & Wellington Street was selected to test the road diet concept as it would be the most impacted in terms of capacity constraints. Existing volumes at this intersection were projected to 2041 based on the growth predicted in the regional EMME model. **Table 5-3** summarizes the link volumes approaching the Yonge Street and Wellington Street intersection under existing, future 2041 Do Nothing, and future 2041 Road Diet conditions. As demonstrated in the screenline analysis in **Table 5-1** and **Table 5-2**, the through traffic volume on Yonge Street decreases.

Table 5-3: Yonge Street and Wellington Street Approach Volumes

Horizon year / Scenario	Approach Volumes			
	Northbound	Eastbound	Southbound	Westbound
Existing 2018	444	736	738	509
2041 Do Nothing	660	1,020	1,310	720
2041 Yonge Diet	486	1,032	935	716

Synchro intersection capacity analysis was undertaken to compare existing intersection operations to the future 2041 Do Nothing scenario as well as the 2041 road diet scenario. **Table 5-4** summarizes the results of the Synchro analysis and detailed reports are provided in **Appendix C**.

Table 5-4: Synchro Results Summary

Horizon Year / Scenario	V/C Ratio							LOS						
	NBT	NBL	EB	SBT	SBL	WBT	WBR	NBT	NBL	EB	SBT	SBL	WBT	WBR
Existing	0.39		0.83	0.68		0.49	0.16	C		D	C		C	
2041 Do nothing	0.99		1.12	1.60		0.98	0.14	E		F	F		C	B
2041 Yonge Diet	0.92	0.84	1.13	1.21	0.60	1.00	0.14	E	F	F	F	C	C	B

(Northbound – NB, Southbound – SB, Eastbound – EB, Westbound – WB, Left – L, Through – T, Right – R)

Under 2041 Do Nothing conditions, the eastbound movement and southbound through movement are anticipated to operate above capacity with v/c ratios of 1.12 and 1.60, and LOS F, respectively. The northbound through movement is anticipated to operate approaching capacity with v/c ratio of 0.99 and LOS E.

Under 2041 road diet conditions, the southbound and northbound movements actually improve with v/c ratios of 1.21 and 0.92, respectively. The eastbound and westbound movements are anticipated to operate similar to the 2041 Do Nothing conditions.

It should be noted that the Town is currently working on installing a southbound right0turn lane at the Yonge Street and Wellington Street intersection, which will help to alleviate constraints at this location.

5.1.3 Conceptual Sightlines Analysis

With the road diet, the intersection may be reconfigured with exclusive, opposing left-turn lanes. By removing shared through-left lanes, sightlines and overall intersection safety should improve. The sightline improvements are illustrated in **Figure 5-5** and **Figure 5-6**.

5.1.4 Compatibility with York Region's Transportation Master Plan

Map 15 of York Region's TMP illustrates the proposed 2032-2041 Transit Network. Although there are plans for Yonge Street to be a dedicated rapidway corridor, the map shows that regular curbside service will continue through the downtown area of Aurora. Therefore, a road diet along Yonge Street through the Town of Aurora does not conflict with York Region Transit's vision. Configuration of bus stops with the lane reduction would require further study as it would not be preferable for buses to stop within the single lane and thus causing traffic queues during boarding and alighting.

5.1.5 Next Steps

Due to the many benefits to safety and operations noted in this analysis, particularly to operations and safety at Yonge-Wellington and at other intersections along the corridor, it is recommended that the Town conduct further public consultation and coordination with York Region to advance the planning of a potential road diet of Yonge Street from south of Orchard Heights Boulevard/Batson Drive to Golf Links Drive/Dunning Avenue.

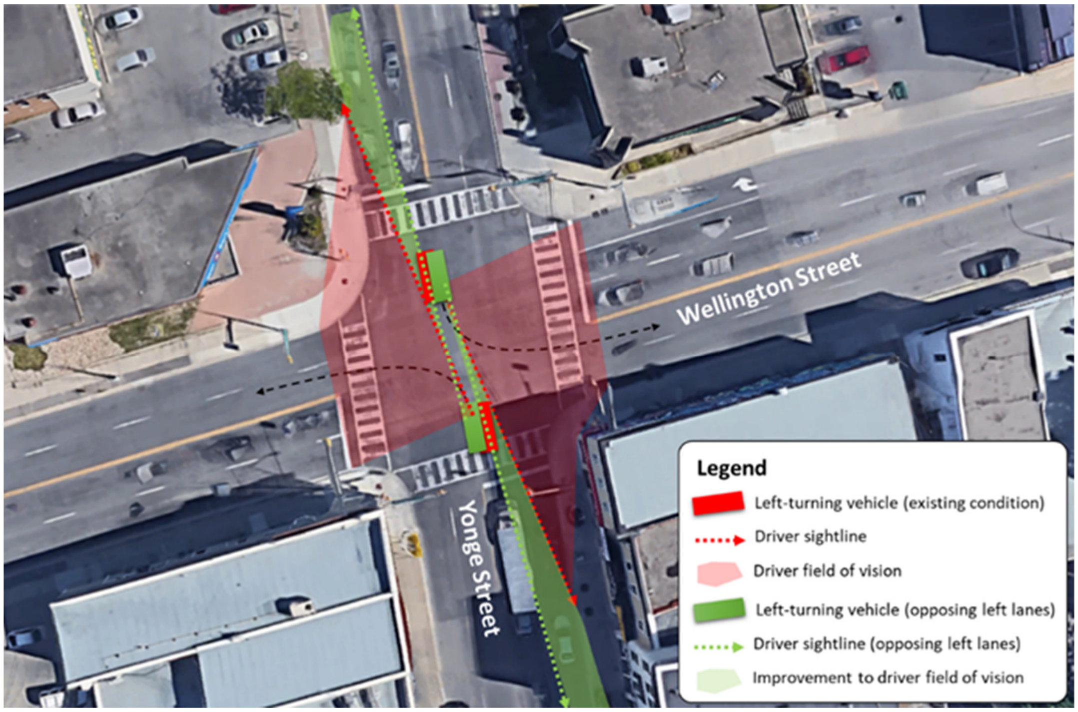


Figure 5-5: Sightline Improvement at Yonge-Wellington – North-South

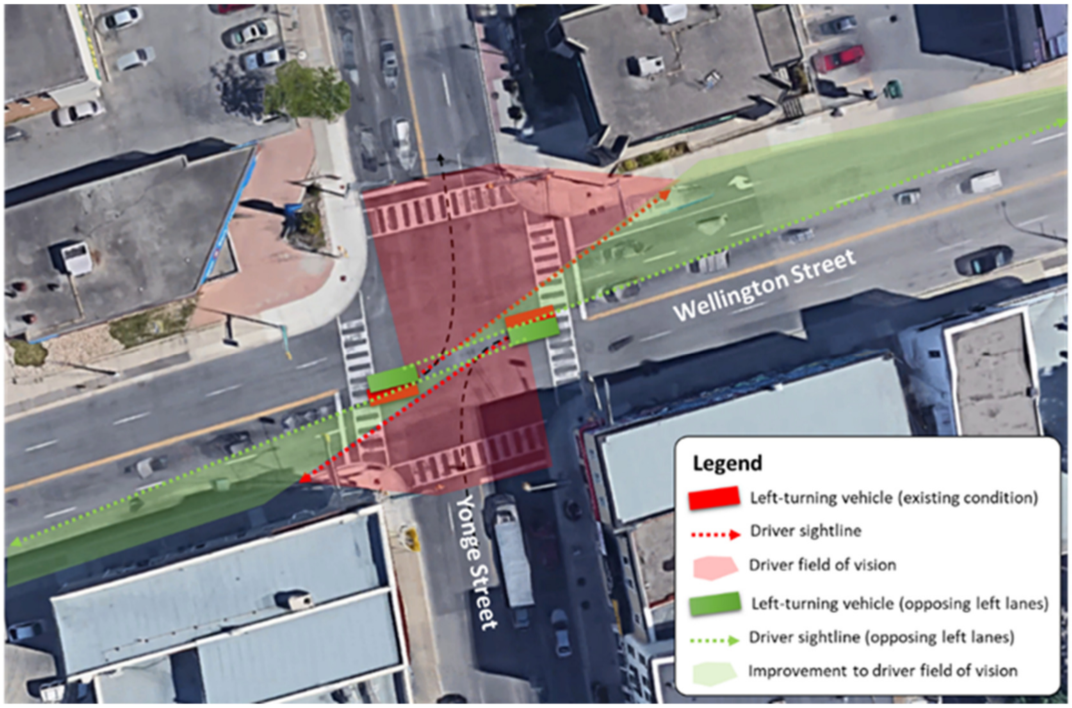


Figure 5-6: Sightline Improvement at Yonge-Wellington – East-West

6 Traffic Diversion Assessment

Based on discussions with the Town of Aurora, traffic diversion (or pass-through traffic) through residential streets was raised as a concern by local residents in various areas in Town but especially the Downtown area. A transportation analysis was conducted to assess driver behaviour through the neighbourhoods generally west and east of Yonge Street and along Elderberry Trail. The analysis will quantify the number of trips using residential streets who are not originating from or destined to that particular neighbourhood, and where a relatively higher proportion of traffic is deemed to be diverted traffic, any potential mitigation opportunities or further study are identified.

The analysis conducted is thus intended to identify routes which are already serving as the finer grid network, and therefore mitigation measures should be implemented on these routes in order to discourage speeding and to enhance community safety.

6.1 Methodology

StreetLight Data, a company that specializes in specializes in location-based travel patterns, was used to conduct a series of analyses to determine any traffic diversion issues in Downtown Aurora. StreetLight Data is based on Big Data that is created by mobile phones, GPS devices, connected cars, commercial trucks, fitness trackers, among other location tracking devices. It allows users to create custom data extractions by identifying origin/destination zones and pass-through zones (middle filters) to identify the amount of diversion that occurs through the residential streets. The City of Toronto has used StreetLight Data for a number of multimodal transportation planning projects. Data extracted was based on daily averages from April 2017 to March 2018, from Monday to Sunday, and from 12am to 12am.

6.2 External Traffic Diversion

The first set of analyses conducted looked at traffic from the Town of Newmarket and the Township of King diverting through residential streets in Aurora to avoid the major arterial roads and intersections. The Town of Newmarket and the Township of King were selected based on typical travel patterns of commuter vehicles. **Figure 6-1** illustrates the zones that were selected external to Aurora.

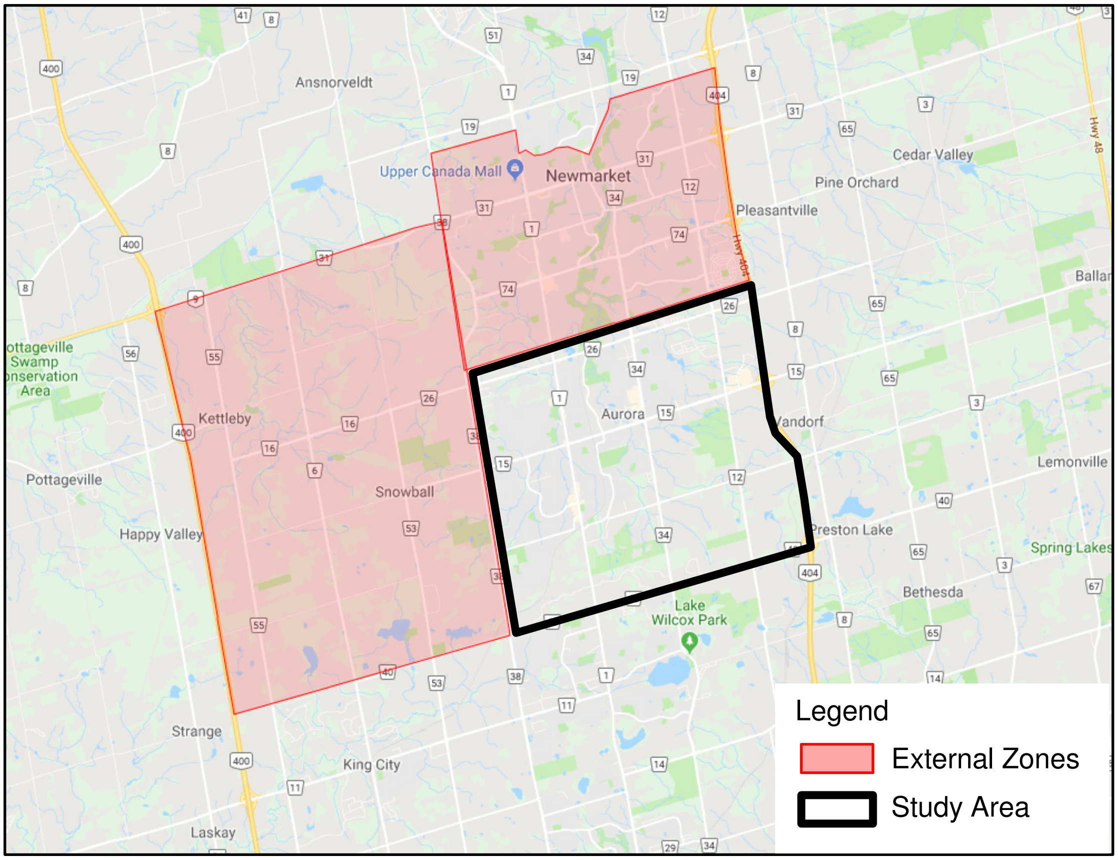


Figure 6-1: External Zones

The Pass-through zones, or streets to be tested for diversion, were selected based on the roads' connections from one arterial to the next. Two distinct areas were assessed for external diversion, and the streets within these zones are also noted.

1. Bathurst to Yonge Street
    i. Heathwood Heights Drive
    ii. Orchard Heights Boulevard
    iii. Aurora Heights Drive
    iv. Kennedy Street

2. Yonge Street to Barrie GO Rail Corridor
    i. Batson Drive
    ii. Mark Street
    iii. Maple Street
    iv. Catherine Avenue
    v. Centre Street
    vi. Old Yonge Street

Figure 6-2 illustrates the locations of the selected pass-through zones.

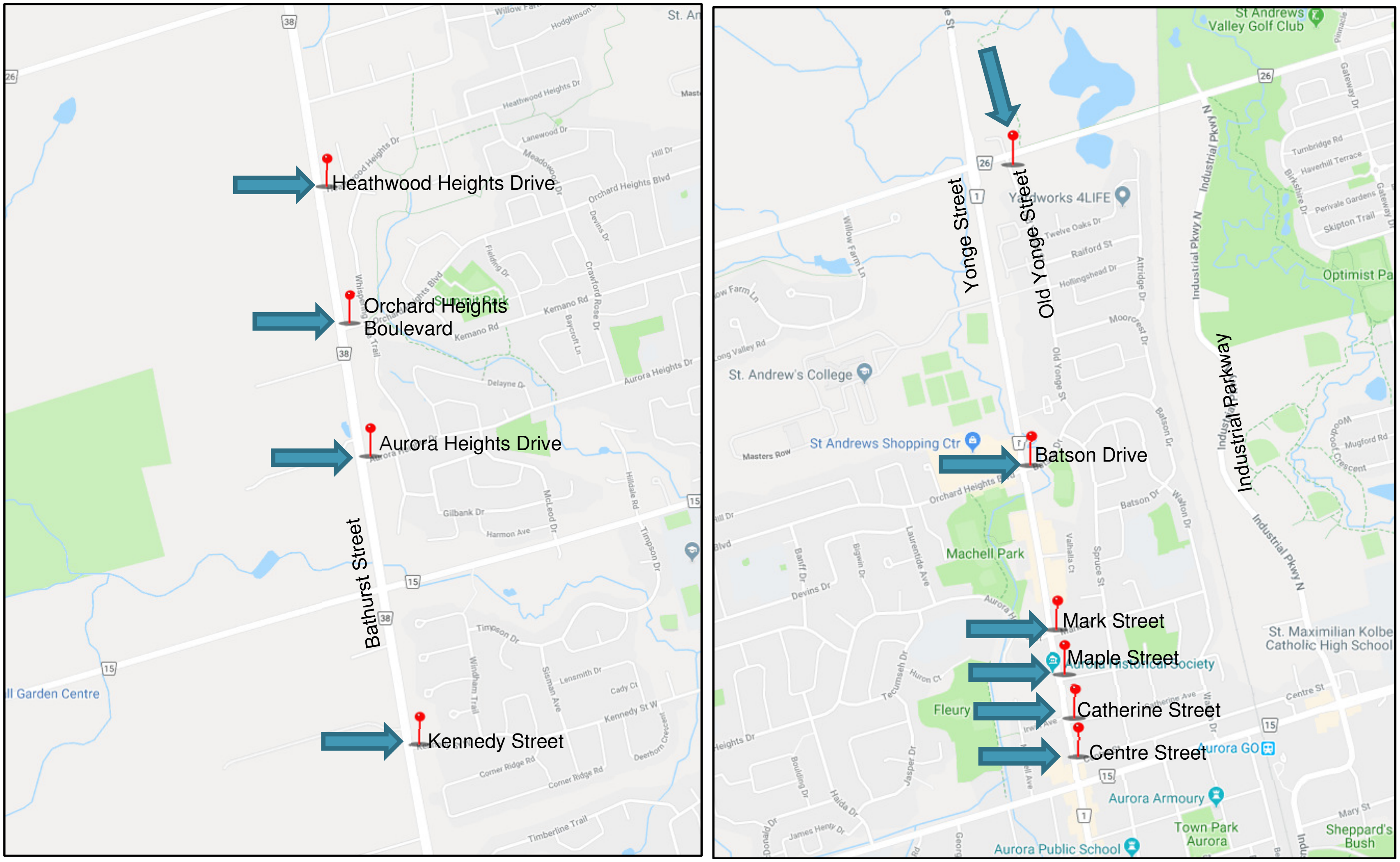


Figure 6-2: Middle Filter Zones

Finally, the destination zones were selected based on the 2006 Transportation Tomorrow Survey (TTS) boundaries and included all the zones within Aurora (zones 2551 – 2574). **Figure 6-3** illustrates the selected destination zones.

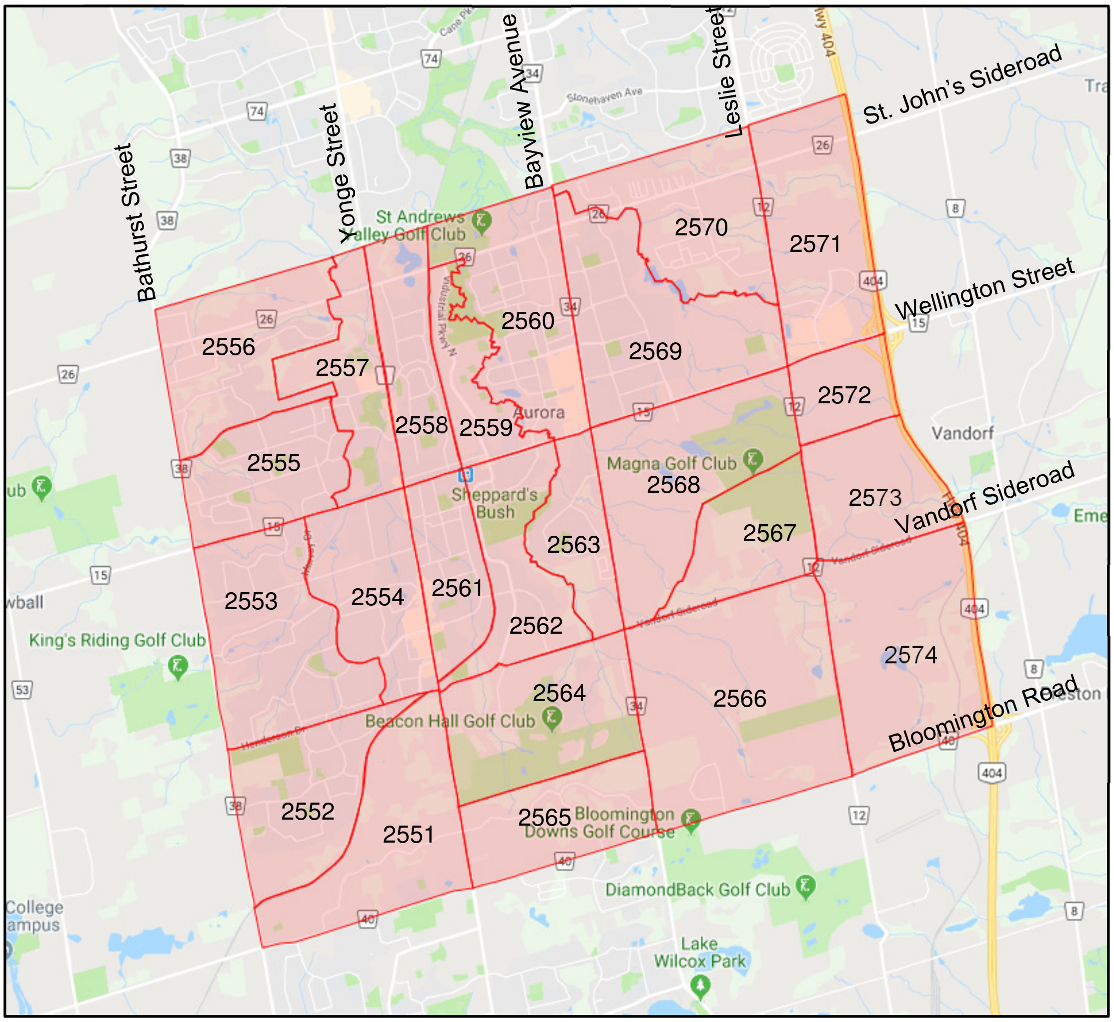


Figure 6-3: 2006 TTS Zones (2551 – 2574)

6.2.1 Average External Pass-Through Traffic - Bathurst Street to Yonge Street

Between Bathurst Street and Yonge Street, four (4) roads were identified as having high potential for pass-through traffic; Heathwood Heights Drive, Orchard Heights Boulevard, Aurora Heights Drive, and Kennedy Street. Based on the StreetLight analysis, the average number of vehicles using a pass-through road on a weekday and weekend are summarized in **Table 6-1** and illustrated **Figure 6-4** for weekdays and **Figure 6-5** for weekends.

Table 6-1: Average All-day External Pass-through – Bathurst Street to Yonge Street

Trip Origins from Newmarket / King using:	**Heathwood Heights Drive**		**Orchard Heights Boulevard**		**Aurora Heights Drive**		**Kennedy Street**	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Trip Destination								
Within same concession block	44	63	115	117	72	63	205	177
Other	5	5	17	10	33	32	17	11
Total	**49**	**68**	**132**	**127**	**105**	**95**	**222**	**188**
% Pass-Through	10%	7%	13%	8%	31%	34%	8%	6%

Note: % Pass-through exceeding 30% highlighted with RED font.

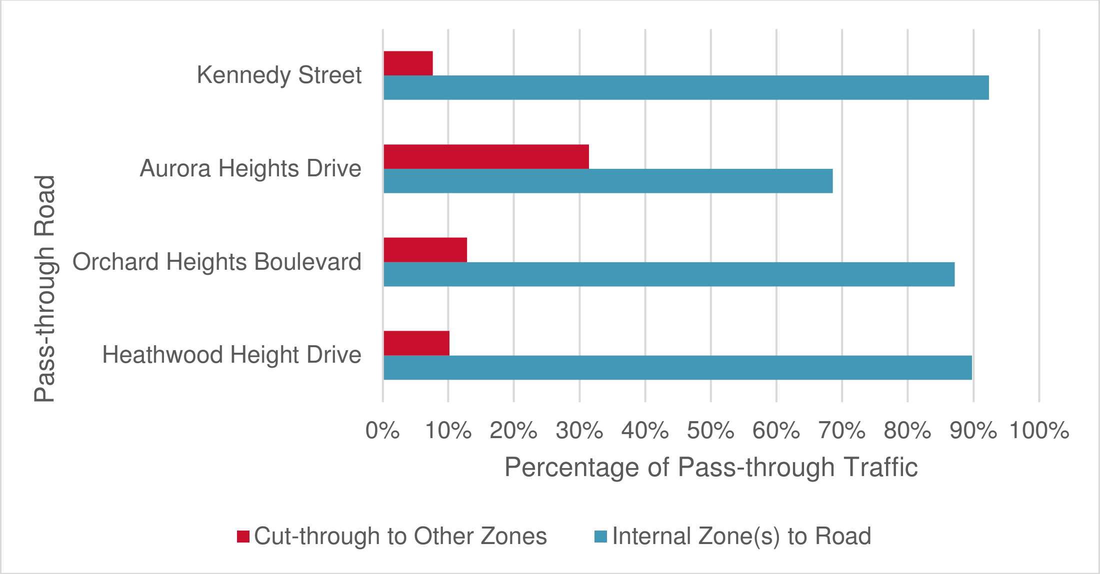


Figure 6-4: Weekday External Traffic Diversion – Bathurst Street to Yonge Street

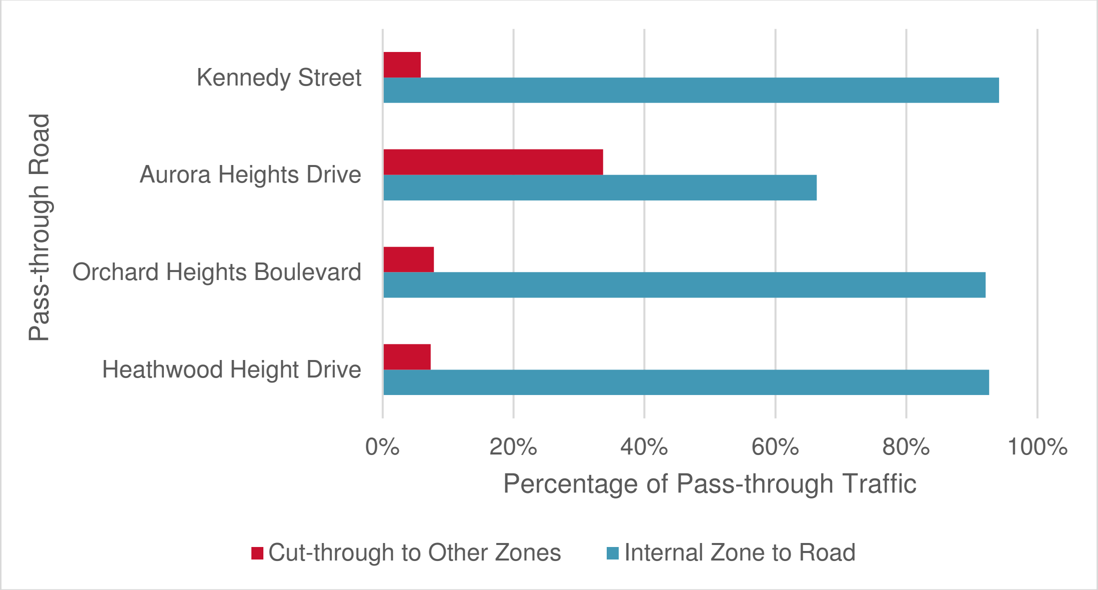


Figure 6-5: Weekend External Traffic Diversion – Bathurst to Yonge Street

The analysis shows that low levels of pass-through traffic are observed on most streets ranging from 6-13%.

<u>Aurora Heights Drive</u> however exhibits very high rates of diverted traffic in the order of one-third. It is possible that given its proximity to Wellington Street, any congestion observed at the Bathurst and Wellington Street intersection may be prompting vehicular traffic to turn onto Aurora Heights Drive to avoid the congestion. Another consideration for the high pass-through volumes is that there are three (3) schools along Aurora Heights Drive and is likely attributed to high volumes of drop-offs.

6.2.2 Average External Pass-Through Traffic - Yonge Street to Barrie GO Rail Corridor

Between Yonge Street and Industrial Parkway, six (6) roads were identified as potential pass-through roads; Batson Drive, Mark Street, Maple Street, Catherine Avenue, Centre Street, and Old Yonge Street. Based on the StreetLight analysis, the average number of vehicles using a pass-through road on a weekday and weekend are summarized in **Table 6-2** and illustrated in **Figure 6-6** for weekday trips and **Figure 6-7** for weekend trips.

Table 6-2: Average All-day Pass-through – Yonge Street to Industrial Parkway

Trips Origins from Newmarket / King using:	**Batson Drive**		**Mark Street**		**Maple Street**		**Catherine Avenue**		**Centre Street**		**Old Yonge Street**	
	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end
Trip Destination												
Within same concession block	129	105	51	43	56	23	31	9	76	34	328	27
Other	32	14	37	22	23	8	3	0	78	26	76	33
Total	**161**	**119**	**88**	**65**	**79**	**31**	**34**	**9**	**154**	**60**	**404**	**60**
% pass-Through	20%	12%	42%	34%	29%	26%	9%	0%	51%	43%	19%	55%

Note: % Pass-through exceeding 30% highlighted with RED font.

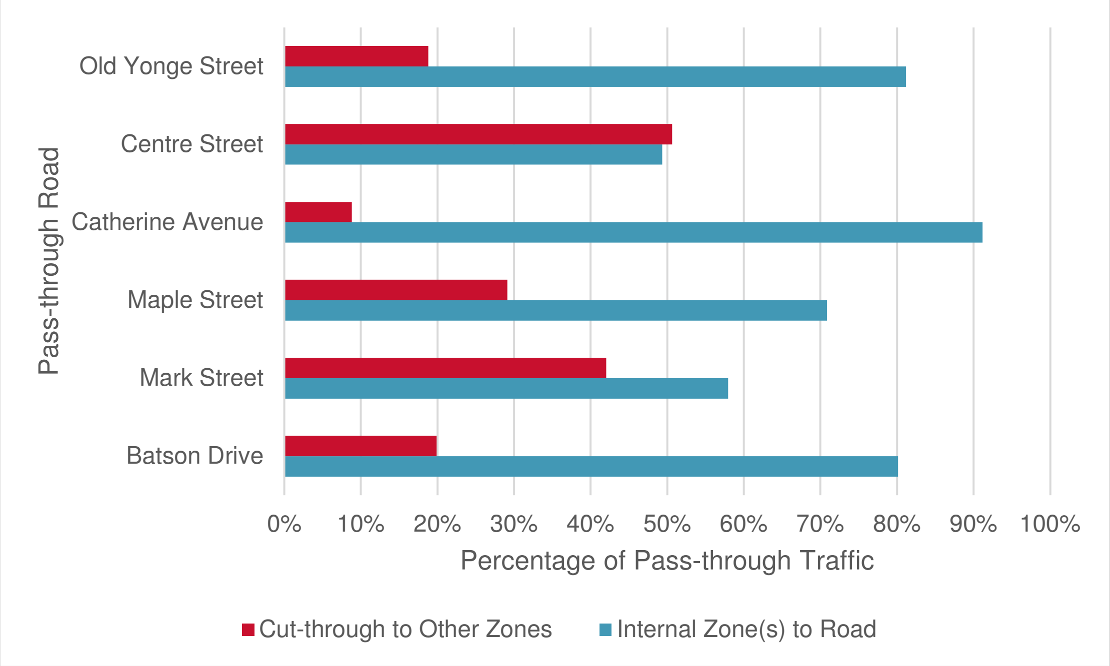


Figure 6-6: Weekday External Traffic Diversion – Yonge Street to Barrie GO Rail Corridor

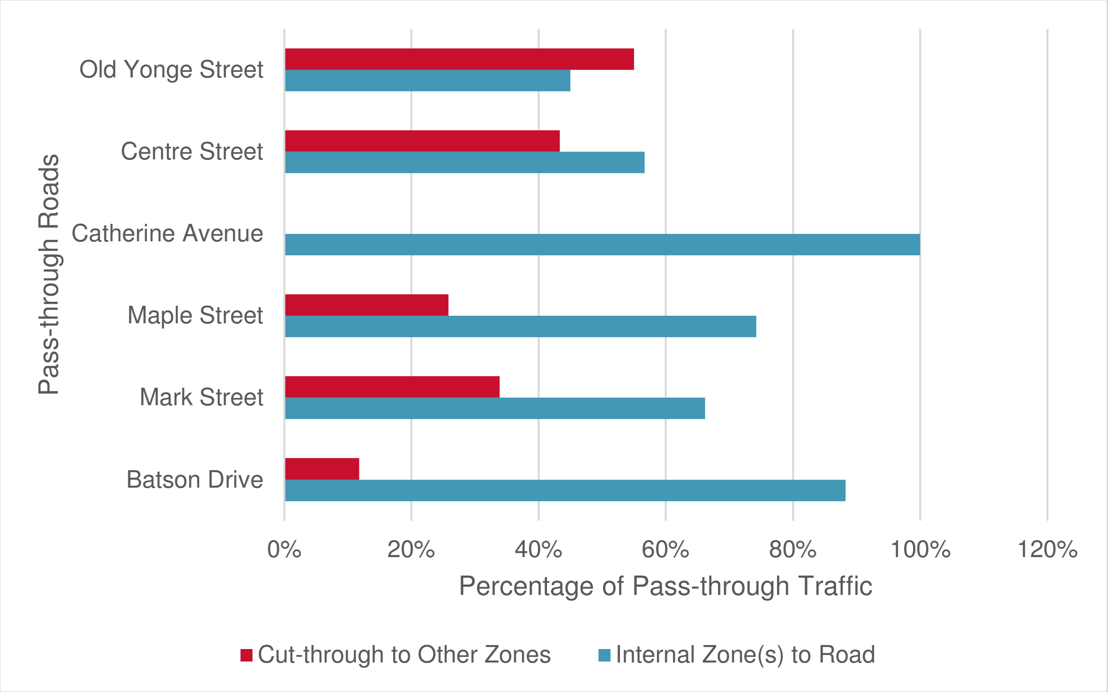


Figure 6-7: Weekend External Traffic Diversion – Yonge Street to Barrie GO Rail Corridor

In general, high diversion is observed on the streets east of Yonge Street. Mark Street and Centre Street in particular serve high proportions of pass-through traffic (34% to 51%). Further discussion on conditions at each of these streets is provided in the following sections.

Mark Street, combined with Aurora Heights Drive, seems to act as a longer distance bypass route for traffic looking to avoid congestion along Yonge and Wellington as well as at the intersection.

Centre Street is located only 75m north of Wellington Street and likely handles a significant amount of pass-through traffic also avoiding congestion at the Yonge-Wellington intersection. It appears that modifications to Centre Street, including one-way operations between Spruce Street and Wells Street, have not deterred motorists from driving the wrong way. Through-traffic diverting onto Centre Street is still able to access Wellington Street via Spruce Street, Catherine Avenue, and Walton Drive. Southbound left-turns from Yonge Street to Centre Street are restricted from 6:30am to 9:30am Monday to Friday.

Catherine Avenue on the other hand exhibits very low pass-through traffic, possibly due to the diverter; however, it was noted by Town staff that many people speed along this street. The street is not continuous for motorists at Spruce Street, diverting traffic back up to Maple Street. It is assumed however that motorists wishing to pass through have learned over time to turn at Maple Street instead.

Maple Avenue exhibits high pass-through volumes at 26% to 29%, despite signage that says, “LOCAL TRAFFIC ONLY”.

Batson Drive pass-through volumes are lower at 12-20%, but this amount is still a concern as the street is lined with driveway accesses for private homes.

Old Yonge Street has a low pass-through rate on weekdays (19%) but a high rate on weekends (55%). Pass-through trips would likely occur on Old Yonge Street where congestion is occurring on Yonge Street south of St. John's Sideroad and at the St. John's Sideroad intersection – but because there does not appear to be significant congestion at this location, we do not recommend any action based on this data as a result.

Key Findings for External Traffic Diversion:

1. Aurora Heights Drive and Mark Street act as commuter routes for external traffic wishing to avoid congestion on Bathurst Street, Yonge Street, and Wellington Street.

2. Centre Street remains used as a pass-through route for external traffic despite AM peak restrictions and one-way conversion between Spruce Street and Wells Street.

6.3 Internal Traffic Diversion

The second set of analyses looked at internal trips originating in Aurora that uses a pass-through road to arrive at a destination within Aurora. **Figure 6-8** illustrates the zones selected to represent the trip origin zones. The same pass-through zones (**Figure 6-2**) and destination zones (**Figure 6-3**) were used for this analysis.

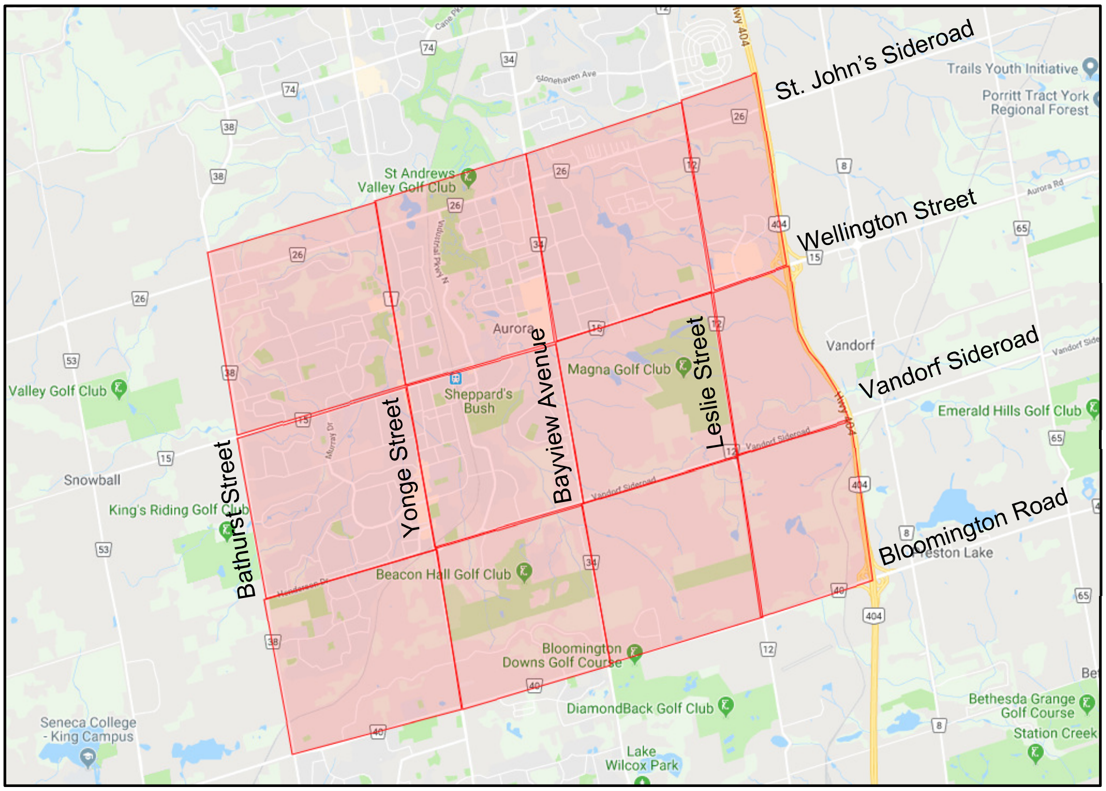


Figure 6-8: Origin Zones

6.3.1 Average Internal Pass-Through Traffic - Bathurst Street to Yonge Street

Based on the StreetLight analysis, the average number of vehicles originating in Aurora and using a pass-through road, between Bathurst Street and Yonge Street, to get to a destination within Aurora on a weekday and weekend are summarized in **Table 6-3** and illustrated for weekdays in **Figure 6-9**, and for weekends in **Figure 6-10.**

Table 6-3: Average All-day Internal Pass-through – Bathurst Street to Yonge Street

Trips Origins – internal Town trips	Heathwood Heights Drive		Orchard Heights Boulevard		Aurora Heights Drive		Kennedy Street	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Trip Destinations								
Within same concession block	39	39	88	105	62	62	140	98
Other	3	2	11	15	7	12	6	4
Total	**42**	**41**	**99**	**120**	**69**	**74**	**146**	**102**
% Pass-through	7%	5%	11%	13%	10%	16%	4%	4%

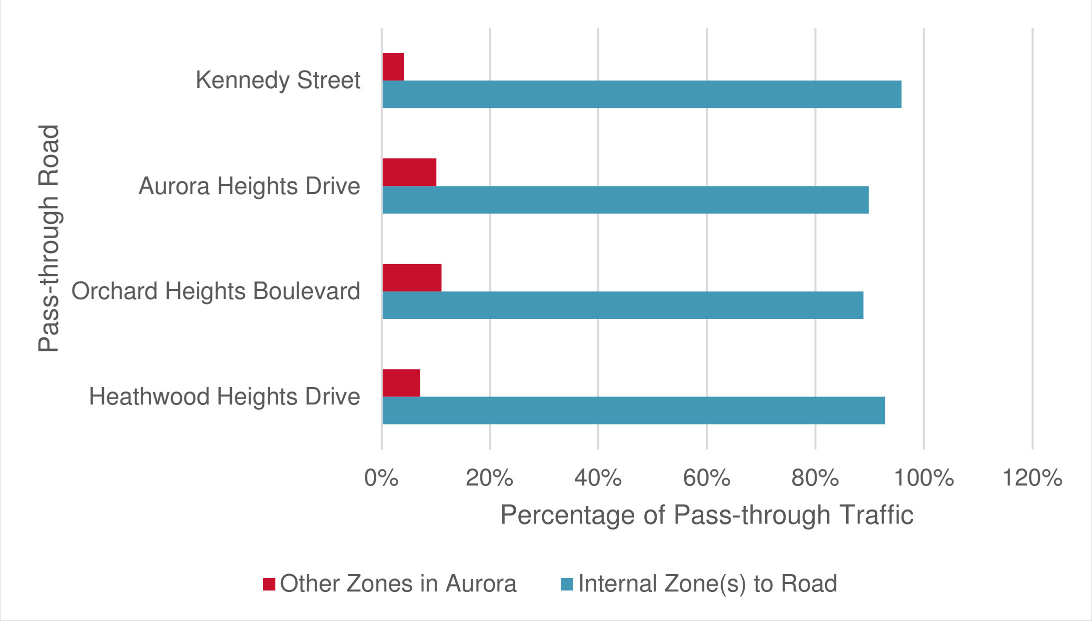


Figure 6-9: Weekday Internal Traffic Diversion – Bathurst Street to Yonge Street

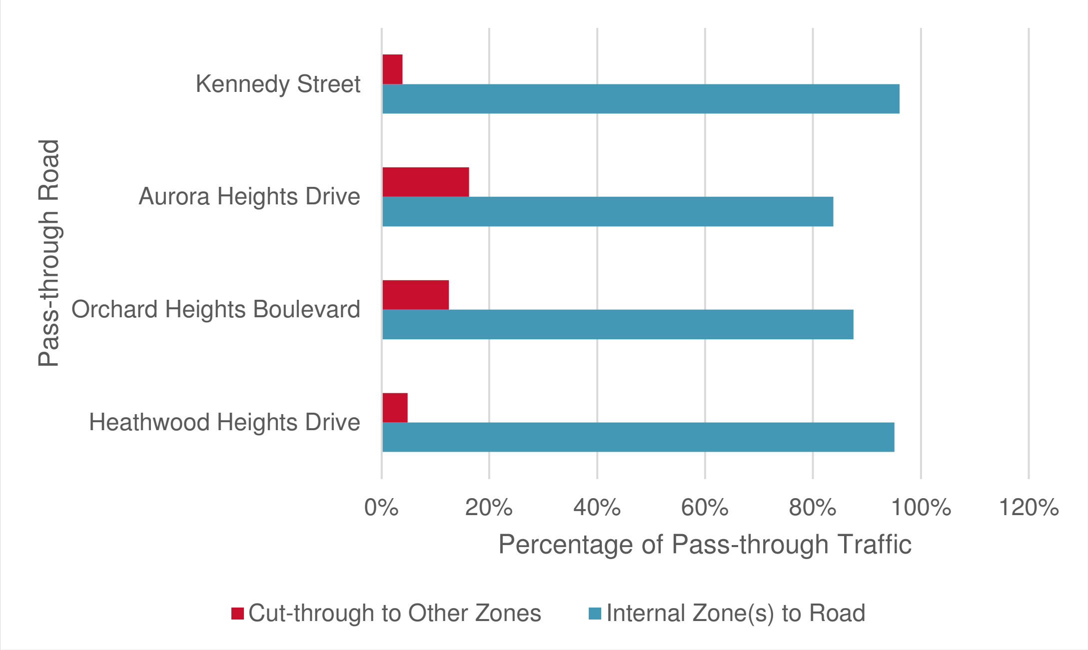


Figure 6-10: Weekend Internal Traffic Diversion – Bathurst Street to Yonge Street

The results for internal traffic origins is comparable to external origins. Through-trips range from 4-13% on Heathwood Heights, Orchard Heights, and Kennedy Street, which is slightly lower than external traffic. Aurora Heights Drive remains the highest relative to the other streets, but the percentage of internal pass-through trips is lower at 10-16%, compared to 31-34% external pass-through trips.

6.3.2 Average Internal Pass-Through Traffic - Yonge Street to Barrie GO Rail Corridor

Based on the StreetLight analysis, the average number of trips using a pass-through road between Yonge Street and Industrial Parkway on a weekday and weekend are summarized in **Table 6-4** and illustrated in **Figure 6-11** for weekday trips and **Figure 6-12** for weekend trips.

Table 6-4: Average All-day Pass-through (12am – 12am) – Yonge Street to Barrie GO Rail Corridor

Trips Origins – internal Town trips	**Batson Drive**		**Mark Street**		**Maple Street**		**Catherine Avenue**		**Centre Street**		**Old Yonge Street**	
	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end
Trip Destinations												
Within same concession block	426	376	222	163	52	102	67	80	133	109	141	119
Other	137	110	315	173	55	55	18	22	107	102	18	6
Total	**563**	**486**	**537**	**336**	**107**	**157**	**85**	**102**	**240**	**211**	**159**	**125**
% Pass-Through	24%	23%	59%	51%	51%	35%	21%	22%	45%	48%	11%	5%

Note: % Pass-through exceeding 30% highlighted with RED font.

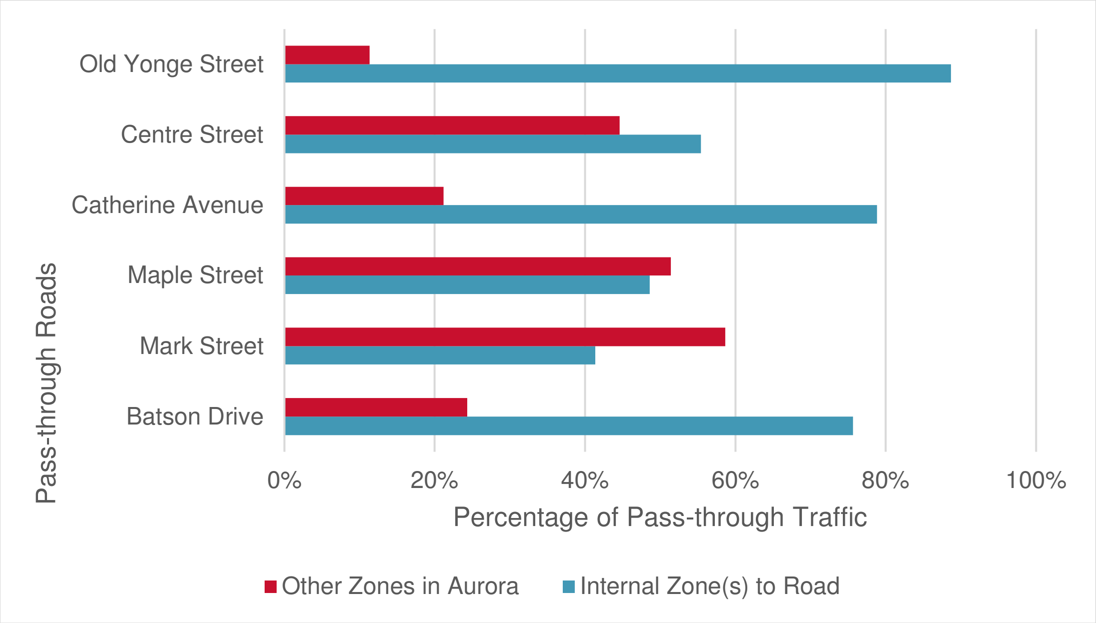


Figure 6-11: Weekday Internal Traffic Diversion – Yonge Street to Barrie GO Rail Corridor

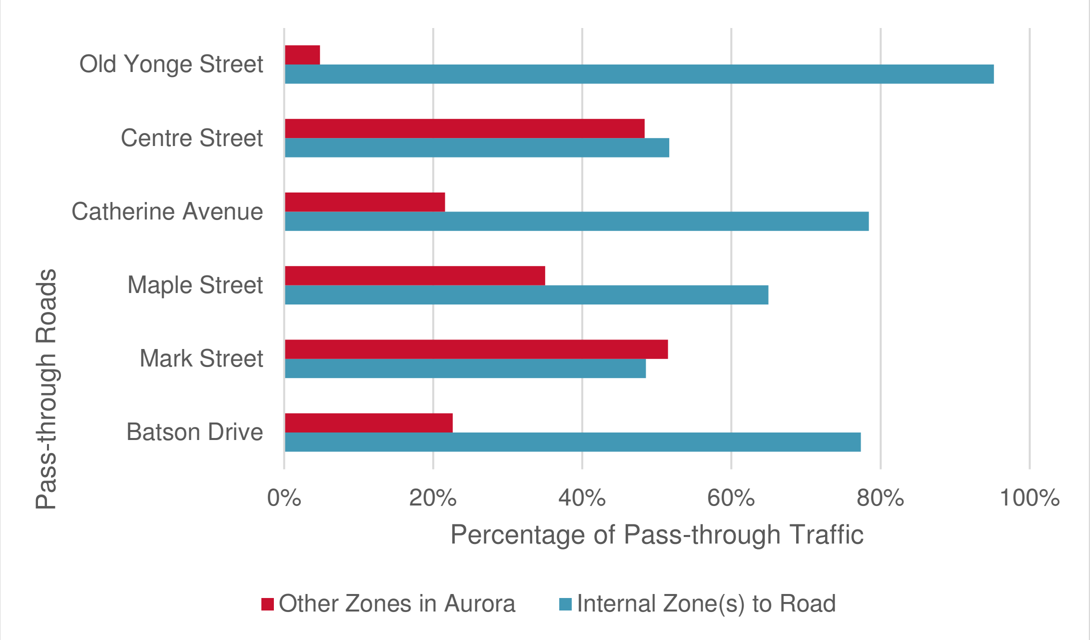


Figure 6-12: Weekend Internal Traffic Diversion – Yonge Street to industrial Parkway

As with external trips, high traffic diversion is observed on the streets east of Yonge Street when focused on trip origins within Aurora. Mark Street, Maple Street, and Centre Street each have the highest level of observed pass-through traffic. To understand any specific geographic influences on the patterns observed, a sensitivity test was conducted to understand the proportion of travel using the streets east of

Yonge Street which originate from concession block west of Yonge Street. This analysis is presented in **Table 6-5**.

Table 6-5: Average All-day Pass-through (12am – 12am) – Yonge Street to Barrie GO Rail Corridor – Sensitivity including trips to/from west of Yonge

Trips Origins – internal Town trips	**Batson Drive**		**Mark Street**		**Maple Street**		**Catherine Avenue**		**Centre Street**		**Old Yonge Street**	
	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end
Trip Destinations												
Within same concession block + block west of Yonge	499	454	501	311	102	143	75	95	215	187	147	119
Other	64	32	36	25	5	14	10	7	25	24	12	6
Total	**563**	**486**	**537**	**336**	**107**	**157**	**85**	**102**	**240**	**211**	**159**	**125**
% Pass-Through	11%	7%	7%	7%	4%	9%	12%	7%	11%	11%	7%	5%

Removing trips from the block west of Yonge Street reveals that a very high proportion of the pass-through traffic using the streets east of Yonge originate or are destined west of Yonge. Generally, these trips are choosing to avoid congestion at the Yonge-Wellington intersection despite numerous traffic calming measures implemented throughout the streets east of Yonge Street.

Improvements to the Yonge-Wellington intersection are critical to mitigating pass-through traffic volumes east of Yonge Street.

Key Findings for Internal Traffic Diversion:

1. Similar to external traffic, Mark Street is used by Town residents to bypass the Yonge-Wellington intersection. From Mark Street, traffic likely utilizes Walton Drive or Industrial Parkway via Centre Street to access Wellington Street.

2. Centre Street is a pass-through route for both internal and external traffic despite AM peak restrictions and one-way conversion between Spruce Street and Wells Street.

3. A significant number of trips to or from the block west of Yonge Street utilize the residential streets east of Yonge Street to avoid congestion at Yonge-Wellington.

4. Improvements at the Yonge-Wellington intersection are critical to mitigating pass-through traffic volumes east of Yonge Street, including improving operations for all movements at the intersection which may be achieved through the road diet concept presented in Chapter 5.

6.4 Traffic Diversion through Elderberry Trail

The final set of analyses looked specifically at trips originating in Aurora that pass through Elderberry Trail to avoid the intersection of Yonge Street & Old Bloomington Road. TTS zones within Aurora (zones 2551 – 2574) were selected as the origin zones as illustrated in **Figure 6-3**. The pass-through zone along Elderberry Trail is identified as the solid red rectangle in **Figure 6-13**. Five destination zones were selected - Bathurst Street Northbound, Bathurst Street Southbound, 15th Sideroad, Red Cardinal Trail, and Bloomfield Trail, and are identified as the transparent red rectangles also illustrated in **Figure 6-13**.

Figure 6-13: Elderberry Trail Pass-through Destination Zones

6.4.1 Average Elderberry Trail Pass-through Traffic

Based on the analysis, the average weekday and weekend trips originating in Aurora and use Elderberry Trail to pass-through are summarized in **Table 6-6.**

Table 6-6: Average All-day Pass-through – Elderberry Trail

Destination of Trips using Elderberry Trail:	15th Sideroad		Bathurst Street NB		Bathurst Street SB		Bloomfield Trail		Red Cardinal Trail		Total	
	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end	Week-day	Week-end
Trip Origins												
Within same concession block	3	6	22	18	21	24	3	0	7	6	56	54
Other Zones in Aurora	5	5	0	0	4	6	1	0	3	0	13	11
Total	**8**	**11**	**22**	**18**	**25**	**30**	**4**	**0**	**10**	**6**	**69**	**65**
% Pass-Through	63%	45%	0%	0%	16%	20%	25%	N/A	30%	0%	19%	17%

On an average weekday there is a total of approximately 69 trips that pass through Elderberry Trail. However, 81 percent of those trips originate internally to the Elderberry Trail zone, while 19 percent originate elsewhere in Aurora. Of those trips that pass through Elderberry Trail, all trips destined to Bathurst Street NB originate internally, while 7 percent of trips destined to 15th Sideroad originate from other zones in Aurora. 6 percent of pass-through trips that originate from other zones in Aurora are destined for Bathurst Street South, while 4 percent and 1 percent are destined for Red Cardinal Trail and Bloomfield Trail, respectively. **Figure 6-14** illustrates the weekday average traffic diversion through Elderberry Trail, and **Figure 6-15** for weekend.

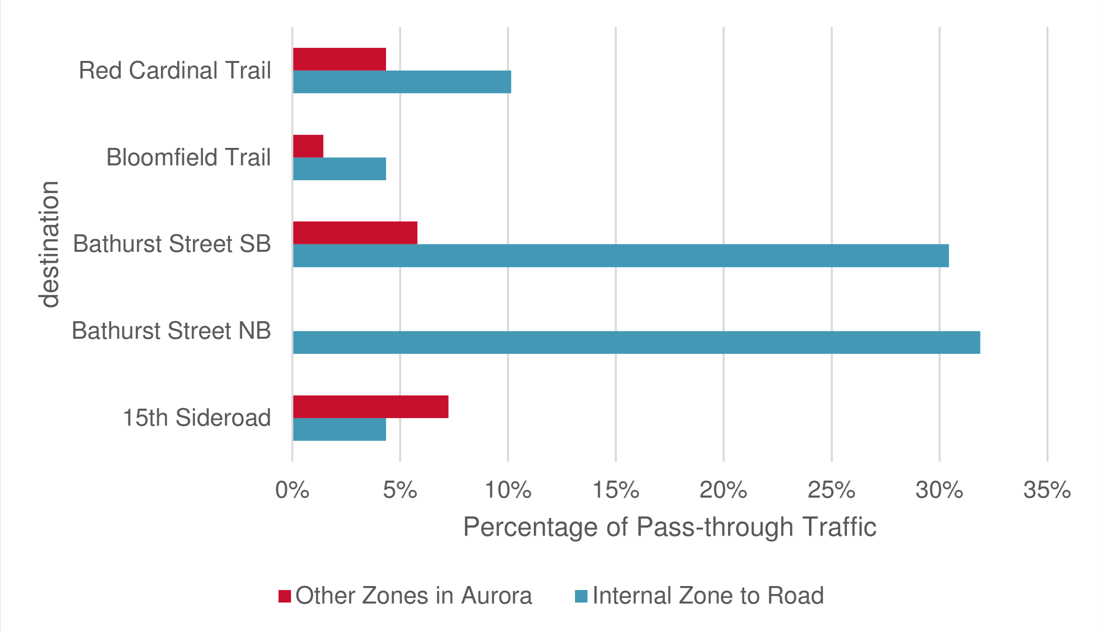


Figure 6-14: Weekday Average Traffic Diversion – Elderberry Trail

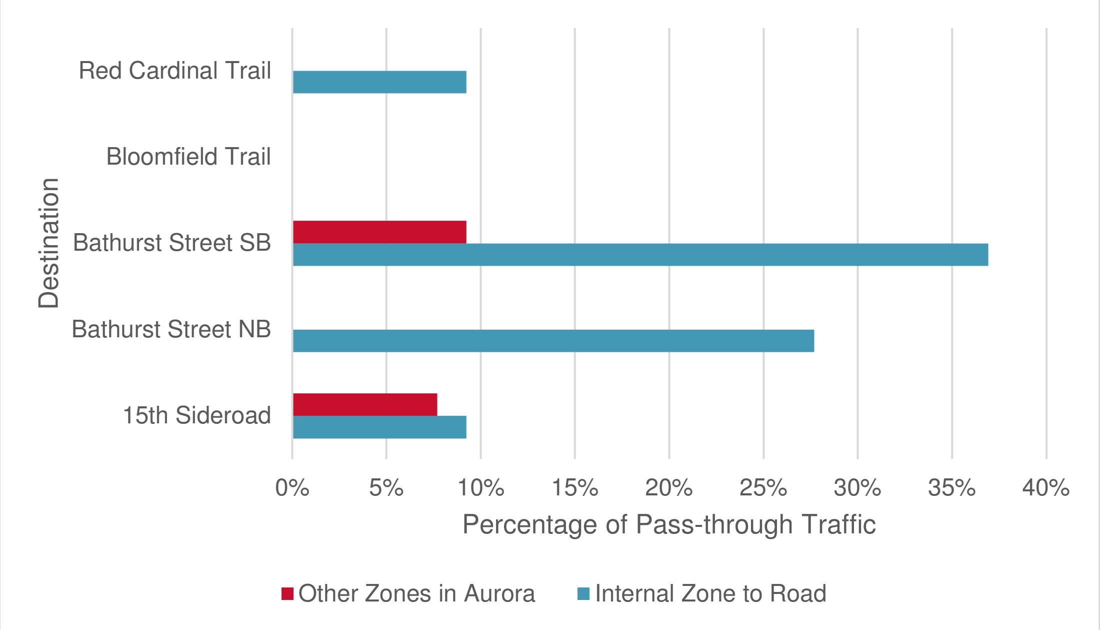


Figure 6-15: Weekend Average Traffic Diversion – Elderberry Trail

The data for traffic diversion on Elderberry Trail indicates that about 20% of all traffic using Elderberry Trail is actually originating outside of that particular neighbourhood.

It is not readily apparent what the reasons might be, as we would not anticipate significant enough congestion for the southbound approach at Yonge Street to Bloomington Road to encourage this behaviour. There may be one-time incidents which may have prompted pass-through traffic on Elderberry Trail, such as construction or a major collision causing lane closures.

Key Findings for Internal Traffic Diversion:

1. Traffic diversion has occurred on Elderberry Trail from April 2017 to March 2018; however, the causes are not apparent. It is recommended that the Town continue to monitor the situation to determine whether the issue is due to one-time incidents or if there is a broader contextual issue which is not apparent through this analysis.

6.5 Summary of Key Findings

The following Town streets identified as commuter routes through this analysis should be considered for enhanced safety measures to minimize speeds and prioritize safety for all road users:

- Aurora Heights Drive from Bathurst Street to Yonge Street
- Mark Street, Walton Drive
- Maple Street
- Catherine Avenue
- Centre Street

It is recommended that the Town undertake further study to identify measures to modify the design of these streets to enhance safety and to encourage slower and safer driver behaviour.

With respect to Elderberry Trail, it is recommended that the Town continue to monitor the situation to determine whether the issue is due to one-time incidents or if there is a broader contextual issue which is not apparent through this analysis.

7 Parking Needs Assessment

A parking needs assessment was undertaken to document current parking conditions within the Aurora Promenade area including along Yonge Street from Wellington to Church Street, Library Square, and the GO Station area. Based on this review, short-term opportunities to address parking issues are identified as well as development of a long-term vision for parking.

7.1 Study Area and Parking Lot Types

Figure 7-1 illustrates the location of each parking lot that was studied. The study limits are defined by two Key Focus areas within the Aurora Promenade character areas: Downtown and Wellington Street Promenade. The survey considers four types of parking areas: Aurora GO Station, municipal lots, private lots, and on-street parking. The shaded fill patterns are used to differentiate each type of parking lot surveyed:

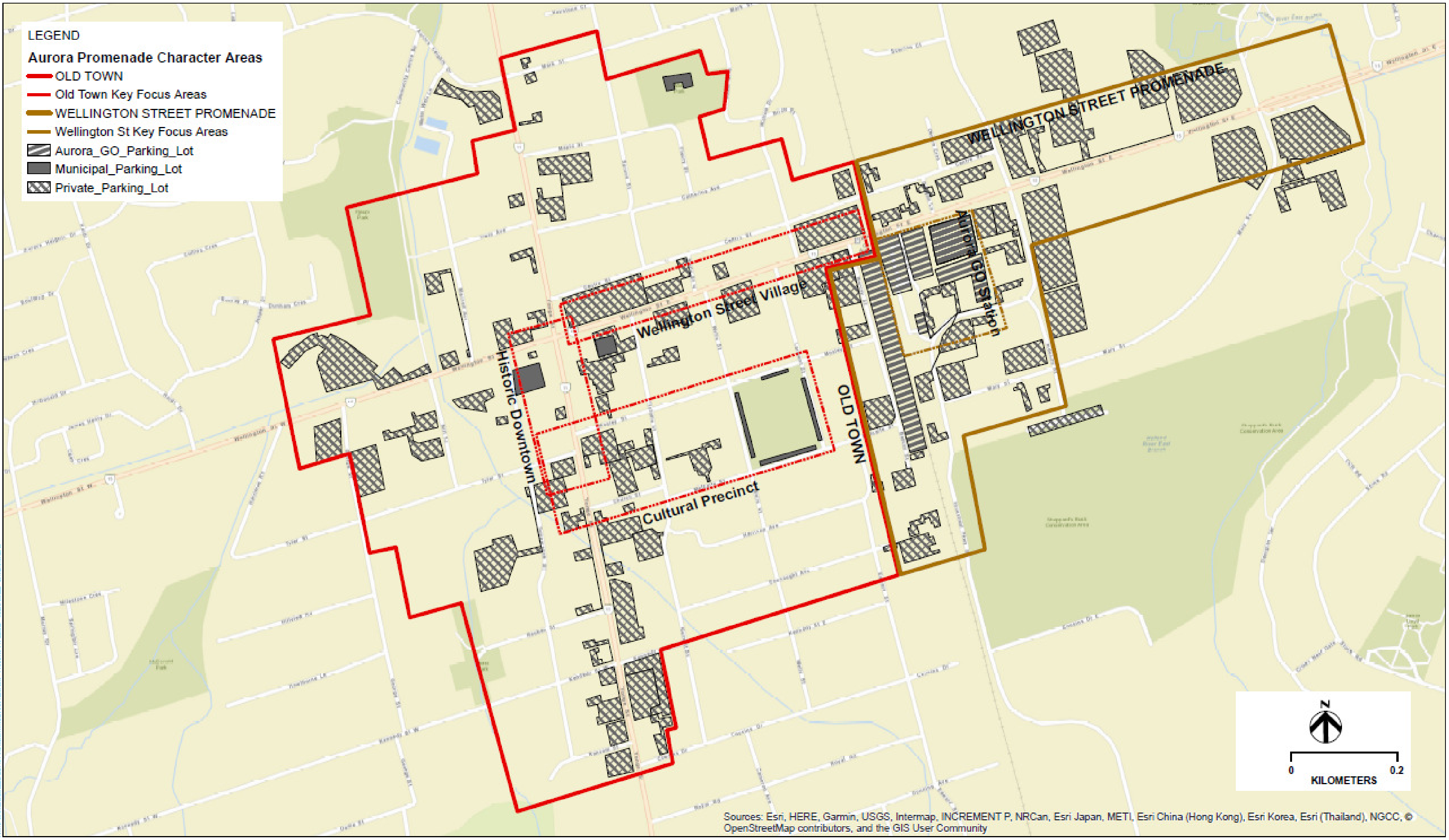
- Linear horizontal hatching for Metrolinx GO Station parking lots;
- Fully shaded fill for Municipal parking lots; and,
- Linear cross hatching for Private parking lots.

All of the parking lots have been assigned an ID number. A full list of parking lots and ID numbers can be found in **Appendix D** and are illustrated in **Figure 7-2**. Different prefix and colours of labels are used to distinctively categorize each type of parking lot:

- Prefix “G” and the green colour represents Metrolinx GO Station parking lots;
- Prefix “M” and the blue colour represents Municipal parking lots; and,
- Prefix “P” and the red colour represents Private parking lots.

7.2 Survey Methodology

The surveys were conducted every half hour between 3:00PM – 6:30PM on Friday, May 11, 2018 and 12:00PM – 3:30PM on Saturday, May 12, 2018. Typical commuter peak hours were not chosen because of the nature of the land uses in the Downtown and Wellington Promenade areas. It was agreed with the Town that capturing the retail parking utilization was important for the purpose of this study and that these two time periods would represent peak parking conditions and would be adequate for the purposes of this analysis. It is further recognized that Friday PM does not reflect peak GO parking demand and that mid-week conditions will typically be higher than the Friday PM results documented in this memorandum. A separate memo was prepared by Metrolinx to address the parking needs of the GO Station.



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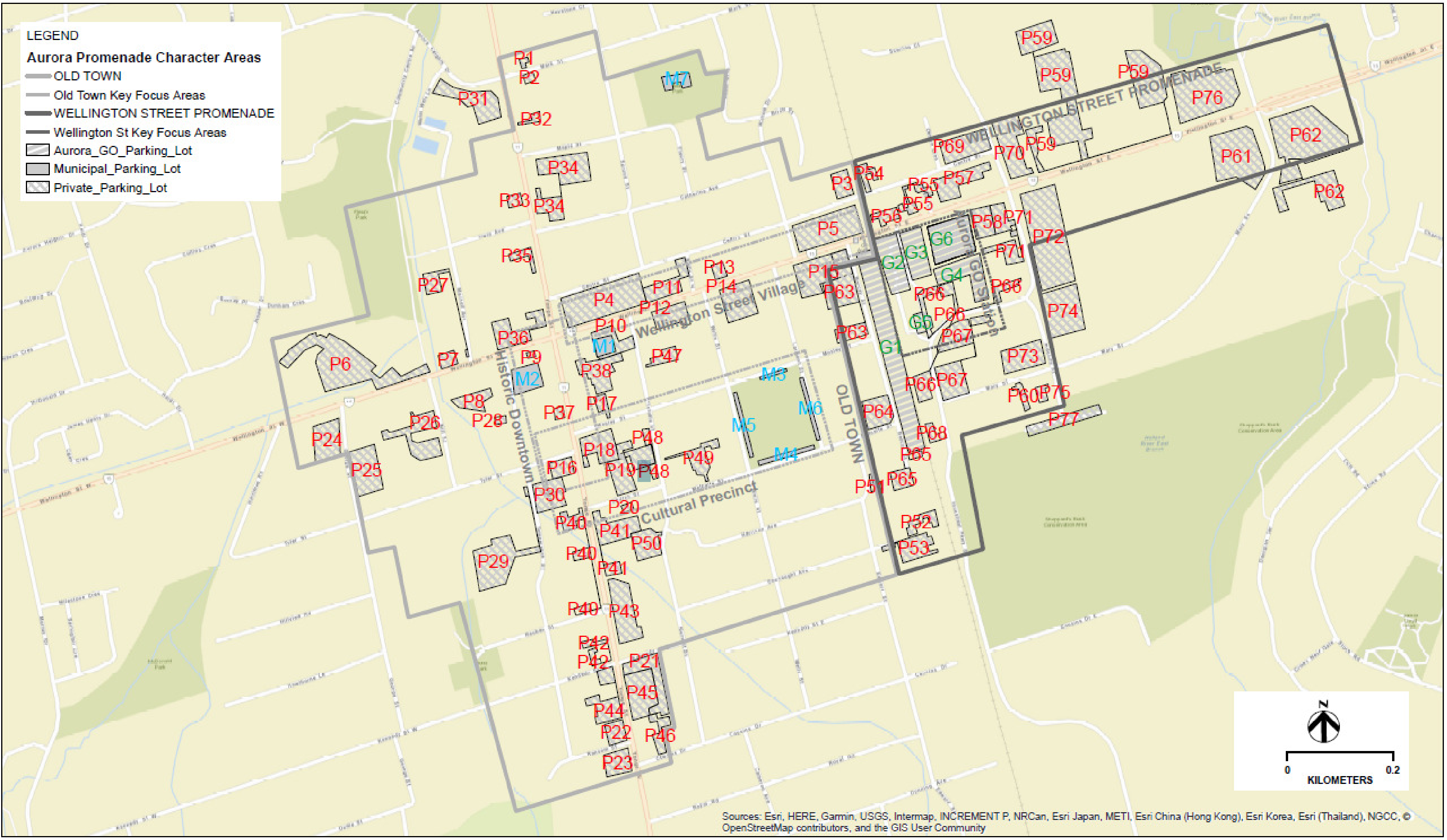
PARKING LOT TYPE
IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
AUGUST 13, 2018

Figure 7-1: Parking Lot Type



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PARKING TYPE WITH ID
IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
AUGUST 13, 2018

Figure 7-2: Parking Type with ID

7.3 Parking Lot Supply

A visual representation of the parking supply at each lot surveyed is shown in **Figure 7-3**.

The colour spectrum solely represents the supply number of each parking lot:

- Red for supply numbers of less than or equal to 25
- Orange for supply numbers between 26 and 50
- Yellow for supply numbers between 51 and 100
- Light green for supply numbers between 101 and 200
- Dark green for supply numbers between 201 and 400

Please note that in **Figure 7-3** the colour spectrum does not reflect the demand of the parking lots. It is also noted that parking supply for on-street locations was not counted.

7.4 Parking Lot Utilization

Parking supply and utilization were counted where utilization reflects the maximum number of parked vehicles surveyed at a given time. The peak number within the above mentioned time frame was taken, and that number was divided by the supply count to obtain a utilization percentage for each parking lot.

7.4.1 Friday Parking Lot Utilization

A summary of the Friday parking survey is shown in **Figure 7-4**. These values are based on the peak observation recorded between 3:00PM and 6:30PM on Friday, May 11, 2018.

The colour spectrum represents the demand of each parking lot in terms of utilization percentage:

- Dark green for utilization percentages less than or equal to 60%
- Light green for utilization percentages between 61% and 70%
- Yellow for utilization percentages between 71% and 80%
- Orange for utilization percentages between 81% and 90%
- Red for utilization percentages between 91% and 100%

Aurora GO Station Parking Lot – Friday Utilization

The GO Station parking lots are in very high demand on Friday afternoon relative to other parking lots within the study area. These parking lots are located within the key focus areas. Specifically, parking lots G3 and G4 exceed 90% utilization whereas parking lot G1 and the 5 storey parking garage, G6, exceeds 80%. The peak time marking these high utilization is at 3:00PM. Utilization decreases throughout Friday afternoon as most local population return from their workplace.

Municipal Parking Lot – Friday Utilization

The Municipal parking lots are readily available on Friday afternoon. Out of 7 parking areas, 6 are under 60% utilized and 1 is between 71% and 80%. The M2 public parking lot with high occupancy may be due the fact that it is surrounded by restaurants and businesses. The peak time recorded at the M2 parking lot is at 6:00PM.

Private Parking Lot – Friday Utilization

The Private parking lots are relatively available as all except 2 parking lots are under 80% utilized. Parking lot P16 with utilization between 81% and 90% is residential, while P32 at 100% utilization belongs to a law firm with 11 total parking spaces. The residential parking lot P16 has a peak time recorded at 3:00PM and the law firm parking lot P32 has its peak time recorded between 3:00PM and 4:00PM.

7.4.2 Saturday Parking Lot Utilization

A summary of the Friday parking survey is shown in **Figure 7-5**. These values are based on the peak observation recorded between 12:00PM and 3:30PM on Saturday, May 12, 2018. The colour spectrum represents the demand of each parking lot in terms of utilization percentage:

- Dark green for utilization percentages less than or equal to 60%
- Light green for utilization percentages between 61% and 70%
- Yellow for utilization percentages between 71% and 80%
- Orange for utilization percentages between 81% and 90%
- Red for utilization percentages between 91% and 100%

Aurora GO Parking Lot – Saturday Utilization

The Aurora GO Station parking lots are in very low demand on Saturday afternoon compared to Friday afternoon. All 6 parking lots are under 60% utilized. This is because the majority of local population use the GO service to reach their workplace. The peak time marking the highest parking lot utilization on Saturday is at 3:00PM.

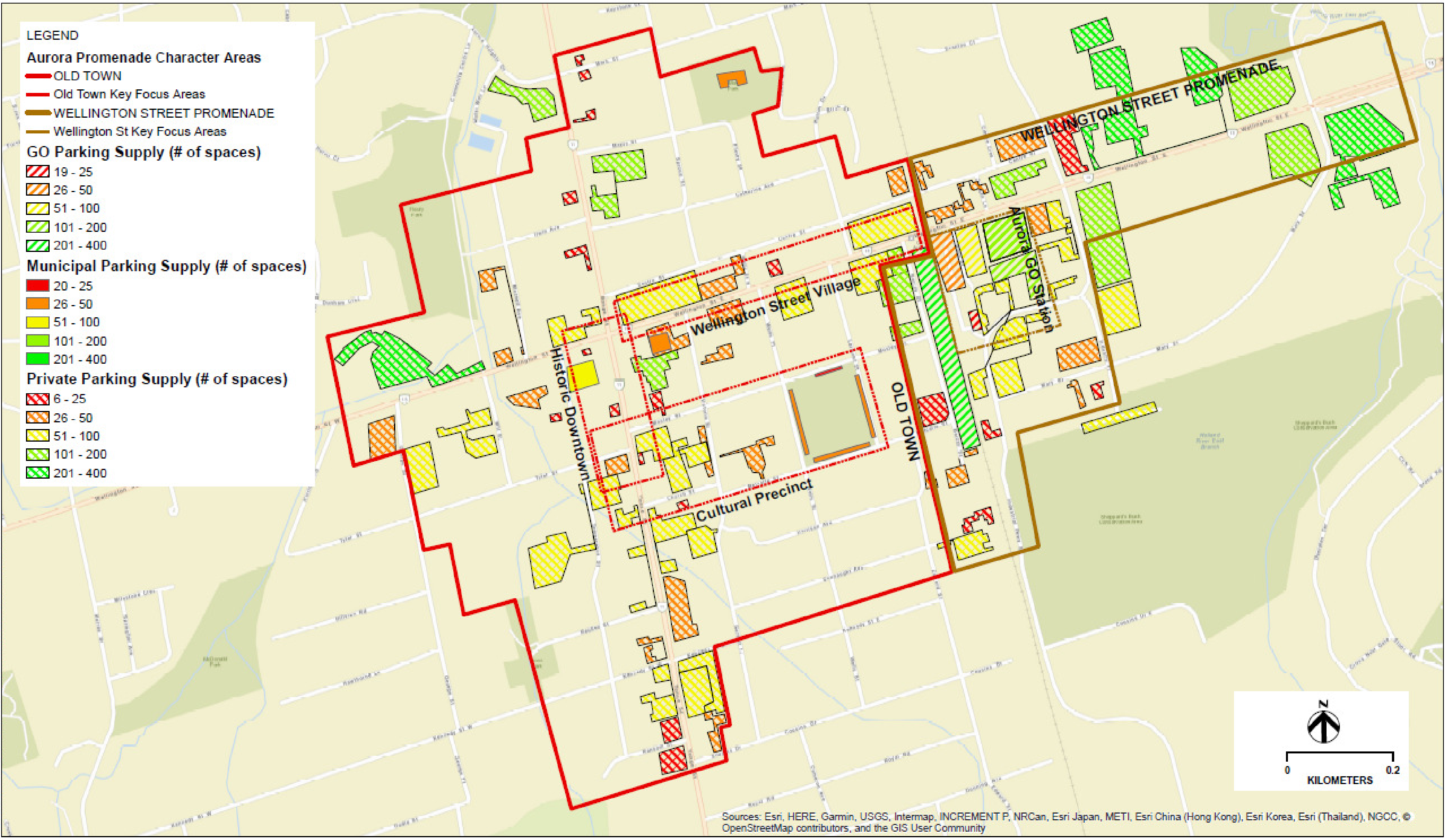
Municipal Parking Lot – Saturday Utilization

The Municipal parking lots are relatively available on Saturday afternoon. The Saturday utilization is as low as the Friday utilization, but the parking lots at the Town Park are being used more on weekends. Hence, parking lots M3 and M4 have higher

Saturday utilization compared to Friday utilization. Parking lot M4 has a peak 89% utilization recorded at 12:00PM.

Private Parking Lot – Saturday Utilization

Most Private parking lots are available on Saturday afternoon. The only exceptions are the law firm parking lot P32 at 91% utilization and 4 other parking lots with utilization between 81% and 90%. The 4 parking lots are P9, belonging to multiple businesses with a peak hour recorded between 2:00PM and 3:00PM, P26, belonging to apartments and long term care with a peak hour between 12:00PM and 1:00PM, P37, belonging to a restaurant with a peak hour between 12:00PM and 12:30PM, and P69, belonging to an engineering company with a peak hour at 1:30PM. Overall, the Downtown key focus areas are in higher demand for parking on a Saturday compared to Friday due to local businesses operating on weekends.



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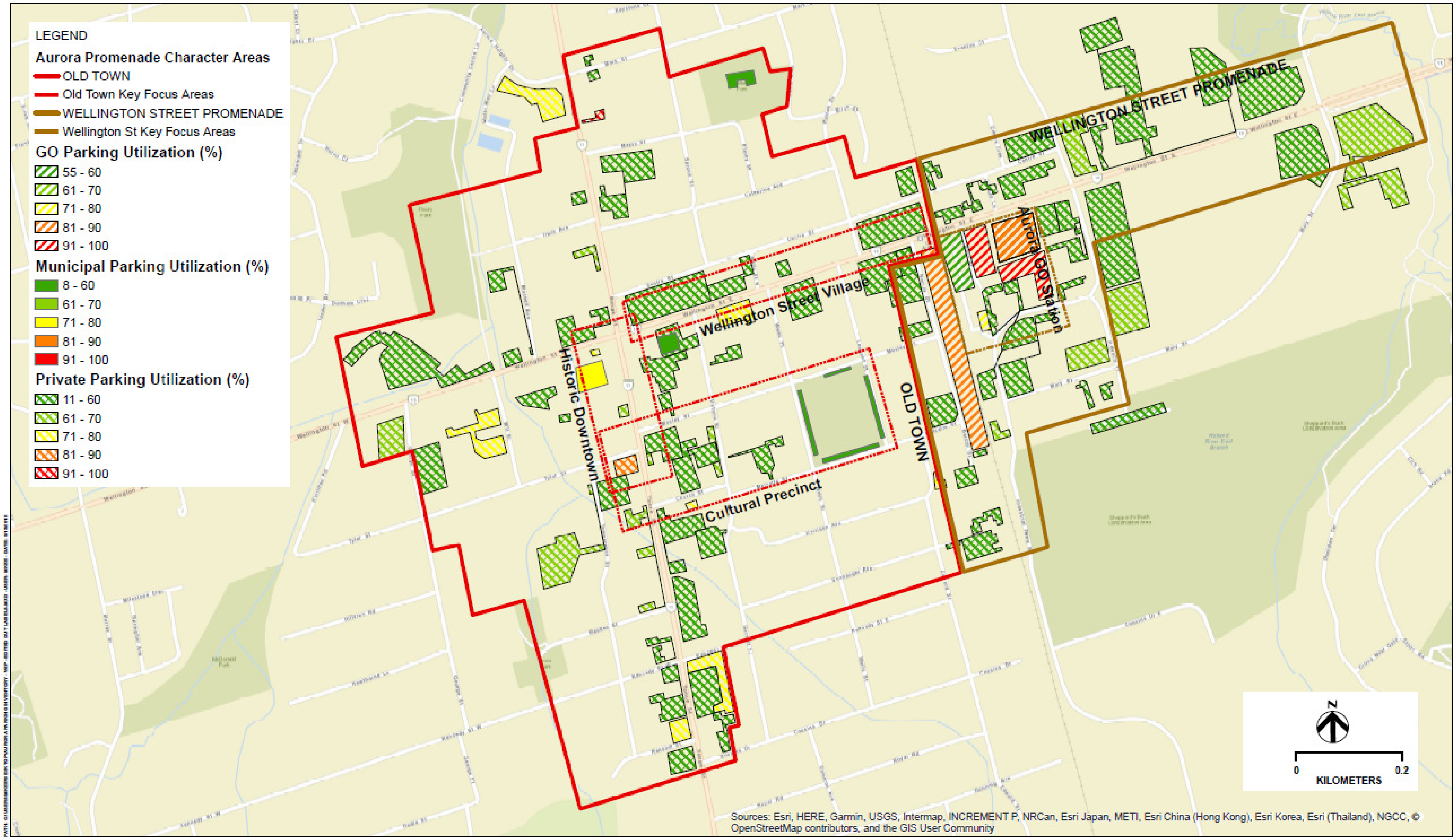
PARKING LOT SUPPLY
IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
AUGUST 13, 2018

Figure 7-3: Parking Lot Supply



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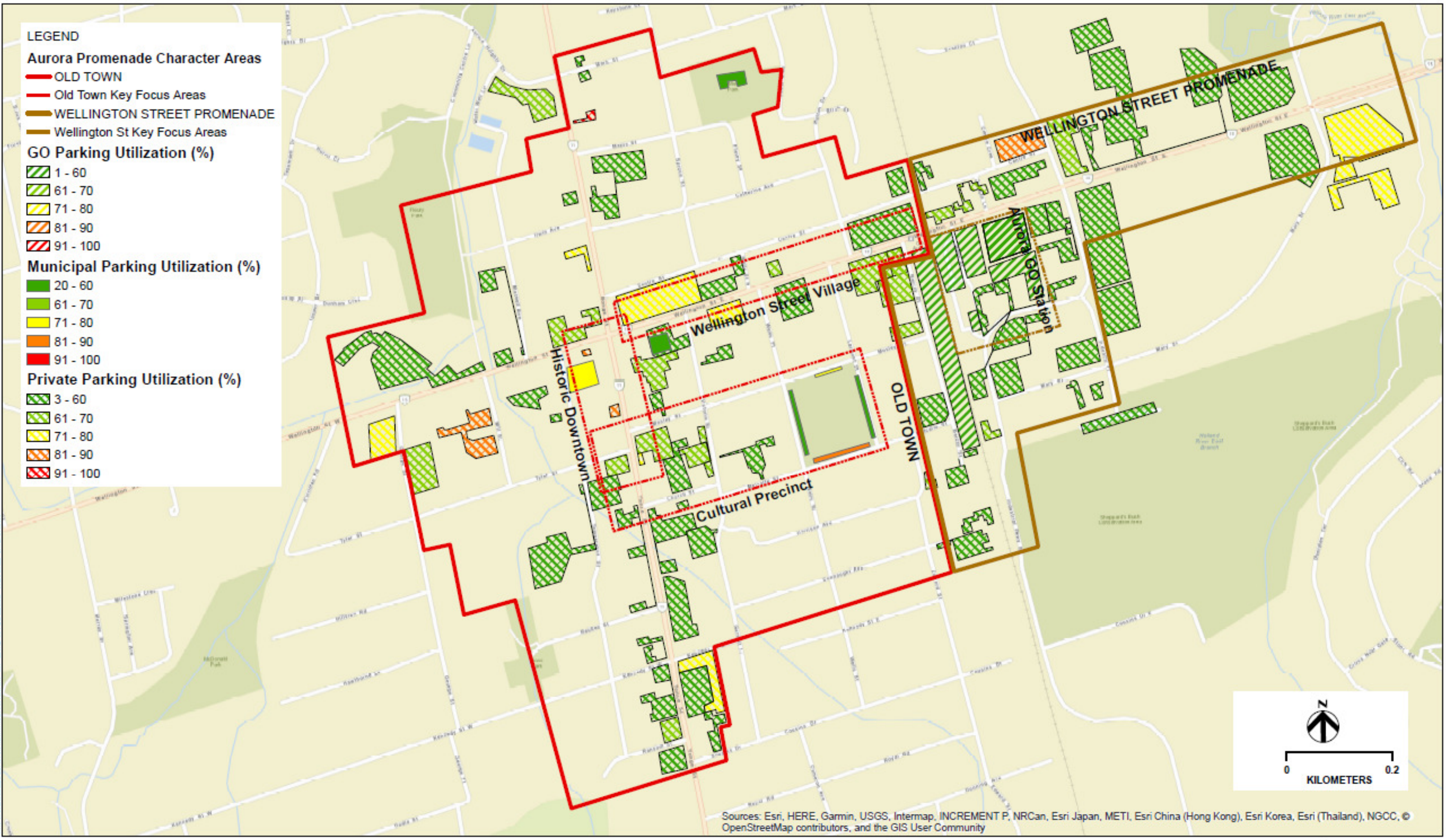
FRIDAY PEAK PARKING LOT UTILIZATION
IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
AUGUST 13, 2018

Figure 7-4: Friday Peak Parking Lot Utilization



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SATURDAY PEAK PARKING LOT UTILIZATION
IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
AUGUST 13, 2018

Figure 7-5: Saturday Peak Parking Utilization

7.5 On-Street Parking Utilization

On-street parking abutting the street curbs that are located within the study limits are also observed by the survey. The same method from the parking lot survey is employed; however, there is no supply count since there are no designated paint markings for on-street parking. The on-street parking survey was conducted every half hour, identifying the number of cars parked on the streets between 3:00PM – 6:30PM on Friday, May 11, 2018 and 12:00PM – 3:30PM on Saturday, May 12, 2018.

7.5.1 Friday On-Street Parking Utilization

A summary of the Friday on-street parking survey is shown in **Figure 7-6**. The colour spectrum solely represents the number of cars parked on that street segment:

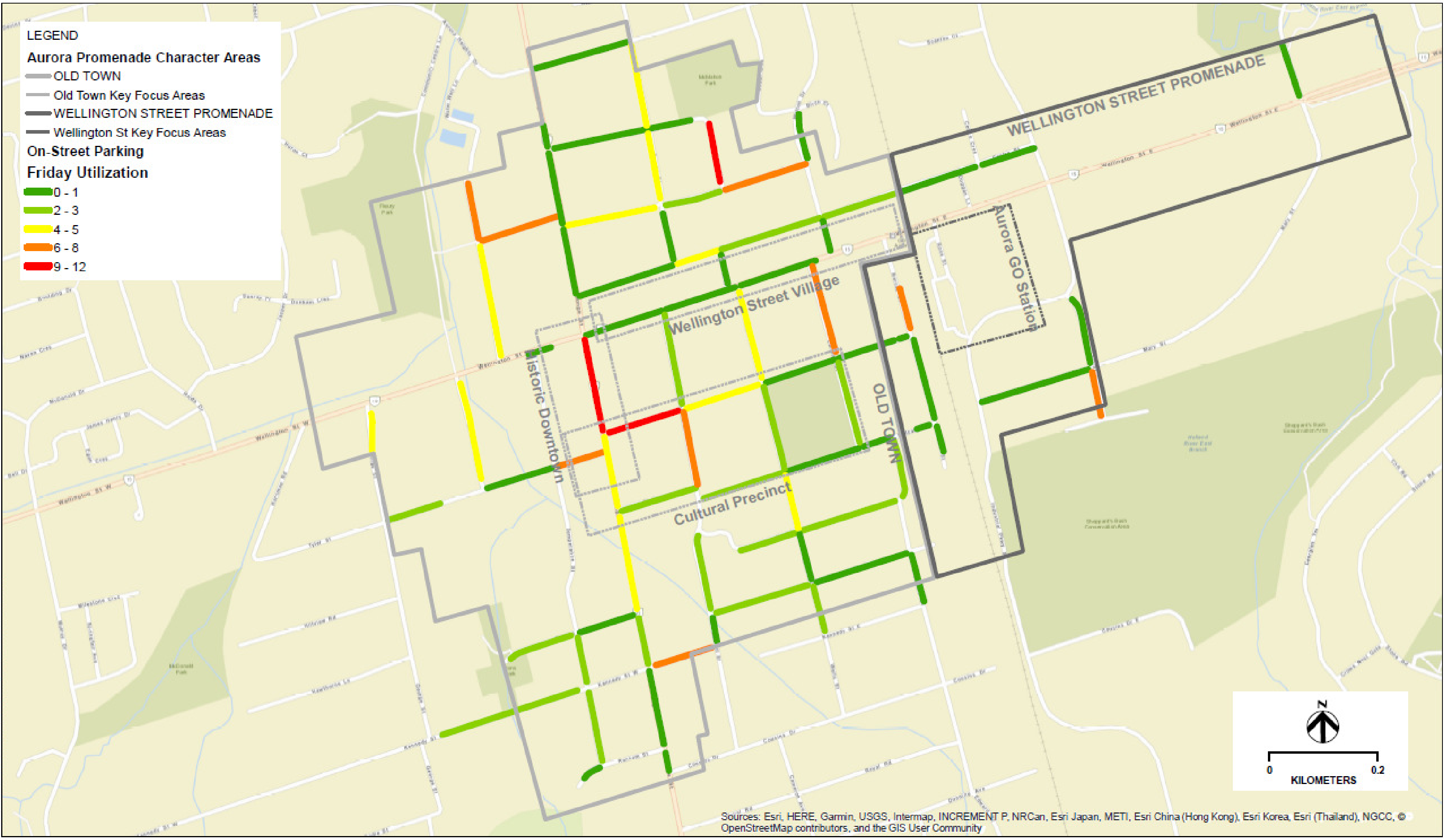
- Dark green colour for 0 or 1 car parked on-street
- Light green colour for 2 or 3 cars parked on-street
- Yellow colour for 4 or 5 cars parked on-street
- Orange colour for 6 to 8 cars parked on-street
- Red colour for 9 to 12 cars parked on-street

Please note that this data does not represent utilization percentage. These values are based on the peak observation recorded between 3:00PM and 6:30PM on Friday, May 11, 2018. Overall, there are high demands on Friday for on-street parking within the Library Square area as well as on the north side of Wellington Street. The 3 streets with highest demand for on-street parking are:

- Fleury Street from Maple Street to Catherine Avenue
- Yonge Street from Wellington Street East to Mosley Street
- Mosley Street from Yonge Street to Victoria Street

Fleury Street is close to McMahon Park where there are tennis courts available to the public. Yonge Street and Mosley Street are at the core of the key focus areas with a lot of businesses surrounding these streets.

In the Wellington Promenade Area, Berczy Street south of Wellington and Industry Street south of Mary Street are well utilized with 6-8 parking vehicles observed in each location. While Berczy Street is signed to allow parking for 3 hours from 9AM to 5PM, Industry Street does not have any signage. Where there is a desire to limit or eliminate parking on Industry Street, appropriate signage should be implemented.



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FRIDAY PEAK ON-STREET PARKING UTILIZATION IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE
JULY 10, 2018

Figure 7-6: Peak On-street Parking Utilization

7.5.2 Saturday On-Street Parking Utilization

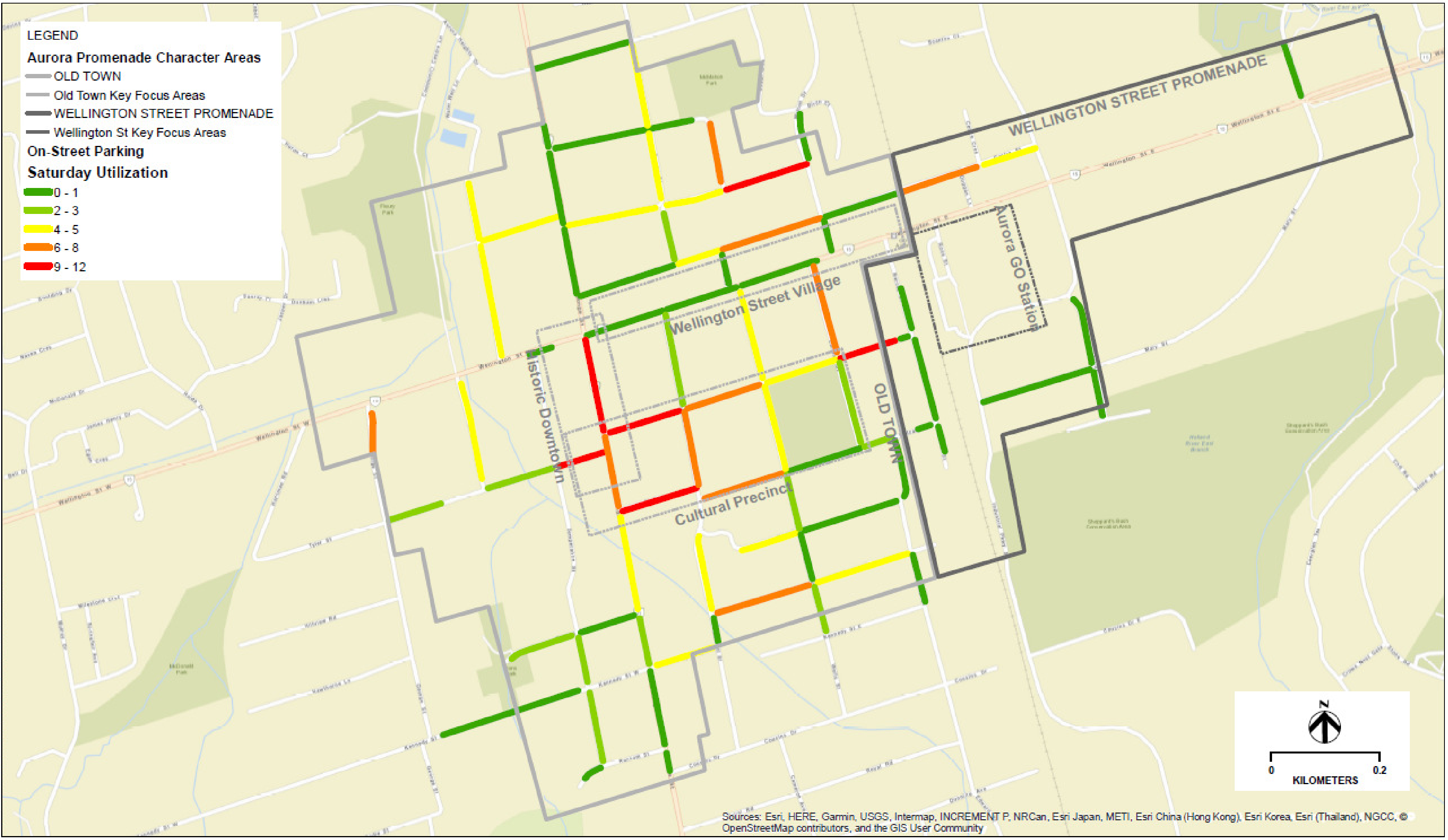
A summary of the Saturday on-street parking survey is shown in **Figure 7-7.** The colour spectrum solely represents the number of cars parked on that street segment:

- Dark green colour for 0 or 1 car parked on-street
- Light green colour for 2 or 3 cars parked on-street
- Yellow colour for 4 or 5 cars parked on-street
- Orange colour for 6 to 8 cars parked on-street
- Red colour for 9 to 12 cars parked on-street

Please note that this data does not represent utilization percentage. These values are based on the peak observation recorded between 12:00PM and 3:30PM on Saturday, May 12, 2018. Saturday on-street parking is higher in demand compared to Friday on-street parking. However, the distribution of the demand is similar. Downtown key focus areas have the highest demand for on-street parking, followed by a dispersion in demand around the key focus areas. The 6 streets with highest demand for on-street parking are:

- Catherine Avenue from Fleury Street to Walton Drive
- Yonge Street from Wellington Street East to Mosley Street
- Mosley Street form Yonge Street to Victoria Street
- Mosley Street from Larmont Street to Berczy Street
- Tyler Street from Temperance Street to Yonge Street
- Church Street from Yonge Street to Victoria Street

The Catherine Avenue segment is in a residential area. The remaining streets are surrounded by businesses and a public library.



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SATURDAY PEAK ON-STREET PARKING UTILIZATION IN OLD TOWN AND WELLINGTON PROMENADE

TOWN OF AURORA

DATE

JULY 10, 2018

Figure 7-7: Saturday On-Street Parking Utilization

7.6 Aurora GO Station Parking Utilization Study

The Aurora GO station already experiences high demand for parking especially during the weekdays as riders commute to work. As plans for Metrolinx to increase service along the Barrie GO Line are underway, ridership and parking demand are also expected to increase. The planned local projects include:

- New track from Union Station to Aurora GO Station and between Aurora GO Station and Allandale Waterfront GO Station in Barrie for more uninterrupted GO service
- Upgrades to the Aurora GO Station, including the addition of two new pedestrian tunnels
- Wellington Street Grade Separation to remove the road-to-rail crossing
- Construction of the new Bloomington GO Station
- More capacity on the Viva bus transit network to create additional connections to and from the Barrie GO corridor

While much of these projects are already underway, it is important to identify the short-term and long-term parking needs to ensure there is a sufficient supply of parking during the on-going work.

Wood Group, formerly known as Amec Foster Wheeler, submitted a parking utilization study of the Aurora GO Station for Metrolinx in April, 2017. This parking count study took place from January 24th, 2017 to January 26th, 2017 from 6:00AM to 7:30PM. The purpose of this study was to identify and evaluate 12 potential parking areas suitable to provide supplemental parking should the demand at Aurora GO Station surpass the supply.

Figure 7-8 illustrates the locations of these parking areas.

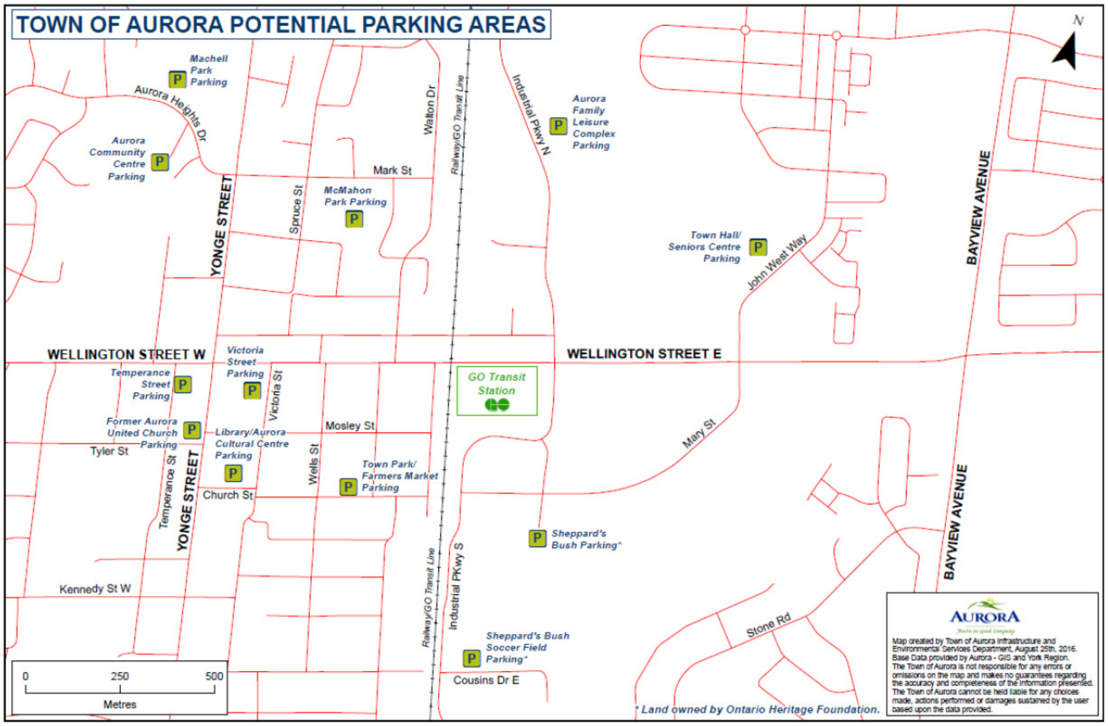


Figure 7-8: Town of Aurora Potential Parking Areas for the Aurora GO Station (Amec Foster Wheeler, 2017)

The evaluation involved 10 criteria, each categorized on a scale of excellent, moderate, and poor. The 10 criteria (with their weighting) are:

- Total number of parking spaces (1.0)
- Peak parking occupancy hours (1.0)
- Estimated number of spaces available during peak hours (3.0)
- Walking Travel Time (2.0)
- Walking Sidewalk Availability (2.0)
- Walking Lighting Availability (2.0)
- Public Transit Travel Time (1.5)
- Number of Modes of Transportation (1.0)
- Public Transit Sidewalk Availability (2.0)
- Public Transit Lighting Availability (2.0)

Table 7-1 summarizes the results of the evaluation in a ranking table, drafted by Wood Group.

Table 7-1: Ranking Table for Potential Parking Areas for the Aurora GO Station (Amec Foster Wheeler, 2017)

Rank	Parking Area	ID	Score (%)	Total Number of Parking Spaces	Estimated Number of Spaces Available During Peak Hours (Winter)
1	Town Park	M3-M6	100	103	91
2	Aurora Family Leisure Complex	N/A	94	293	145
3	McMahon Park	M7	88	27	27
4	Sheppard's Bush Soccer Field	N/A	85	68	68
5	Town Hall/ Seniors Centre	N/A	83	190	47
6	Library/ Aurora Cultural Centre	P19	81	97	21
7	Victoria Street	P10,M1	81	26	12
8	Temperance Street	M2	79	60	26
9	Former Aurora United Church	N/A	77	13	4
10	Aurora Community Centre	N/A	71	171	129
11	Machell Park	N/A	68	50	34
12	Sheppard's Bush	P77	48	80	15
TOTAL					**652**

There are additional considerations on top of the above mentioned criteria due to the short length of the study period:

- Feasibility of enforcing parking areas reserved for GO train users and for the lots original purpose;
- Fluctuation in parking availability based on seasonal fluctuation (since this study took place in winter months);
- Anticipated parking growth rates;
- Impact to adjacent property owners and businesses; and,
- Condition and adequacy of existing sidewalks and lighting along the proposed routes.

Metrolinx's method of evaluation to rank each parking areas can be found in **Appendix E.**

It must be noted further that the findings of the 2017 Metrolinx study are somewhat outdated. Recent observations by the Town indicated that the Town Hall/Seniors Centre is at full capacity, Library Square us currently in the design and planning phase and parking is anticipated to be at full capacity, and on-street parking for GO riders is not supported by the Town.

7.7 Aurora GO Station Parking Recommendations

Upon review of Metrolinx's study, it is our opinion that the proximity is underestimated in the evaluation methodology. Based on this, we believe that three sites should be considered more strongly as supplemental parking sites which may either specifically support the GO station or be formalized as municipal parking lots. These include Town Park, Sheppard's Bush Soccer Field, and Sheppard's Bush, which are the only three lots within a comfortable 400m or approximately 5 minute walk to the Aurora GO station platform.

Town Park: Based on the MTS survey, during the Friday PM Peak, the parking spaces surrounding the Town Park are under-utilized, with a total of only 15 vehicles parked in over 100 spaces available. Allowing parking in these spaces will better utilize the infrastructure during the weekdays and avoid illegal parking.

Sheppard's Bush Soccer Field: Within a 400m walking distance, this parking lot can provide a supplement space for parking. Although not surveyed by the MTS, the parking characteristics would likely be characteristic of other recreational facilities with low utilization during weekday daytime, and higher during weekday evenings and weekends. While an existing sidewalk on the east side of Industrial Parkway provides comfortable space, it is noted that street lighting only exists on the west side of the roadway. In addition, a formal walkway between Industrial Parkway should be considered through private property to improve pedestrian and cyclist accessibility to the GO station.

Sheppard's Bush: Based on the parking surveys completed for the Town's MTS, it is noted that vehicles are parking on-street in close proximity to the GO Station on Industry Street south of Mary Street during the Friday PM peak period. This is one of the few on-street locations which does not have any existing signage either disallowing parking or identifying a limited time for parking. It is also noted by Town staff that GO riders are already parking in the Sheppard's Bush parking lot to access the GO Station. Based on the MTS surveys, about 15 vehicles were observed during the Friday PM Peak.

Although Sheppard's Bush ranked 12 on the list, it has been noted by the Town of Aurora that GO riders already park there as well as along Industry Street, south of Mary Street. Since Sheppard's Bush has been identified as a desirable location for GO parking, consideration may be taken to improve the current conditions to meet the parking lot criteria if supplemental parking is needed long-term. This includes paving the lots and Industry Street and the addition of sidewalks and lighting. In addition, a formal walkway between Industrial Parkway should be considered through private property to improve pedestrian and cyclist accessibility to the GO station. It is recommended that the Town engage with Lake Simcoe Region Conservation Authority and Metrolinx in order to advance the planning for this option.

7.8 Short-term Recommendations

GO Station Parking Demand: The Aurora GO Station should be monitored closely to ensure that there is no overflow during its actual peak hours on busy weekdays. If there is a consistent lack of supply to address high parking demand at the GO Station parking lots, temporary parking solutions should be provided to minimize conflict with neighbouring business owners and residents, including formalizing usage of the Town Park parking spaces, the Sheppard's Bush Parking Lot on Industry Street, and the Sheppard's Bush Soccer Field. Supplemental works would be required to provide sidewalks and/or lighting to improve safety between the GO station and these potential overflow parking lots.

On-Street Parking on Yonge Street: If the traffic demand along Yonge Street from Wellington Street to Church Street increases, the on-street parking along this segment should be strictly enforced to maximize safety and reduce congestion. On-street parking along a high demand corridor will increase.

7.9 Long-term Needs and Recommendations

Consolidate private lots in the Downtown: Consolidation of private lots into municipally owned and managed lots promotes efficiency in land use, creates land for new development, and results in increased pedestrian activity in the area. This change could be considered alongside potential changes to on-street parking along Yonge Street through a potential Road Diet.

215 Industrial Parkway South: This is a property owned by the Town of Aurora and is currently leased for military storage. Although this property is located outside of the study limits, there is a possibility of this property being served as an additional parking lot in the future, if necessary. Given its distance from high demand locations in the Town, this site is likely best utilized or considered as an off-site parking location for autonomous vehicles. While policy and legislation regarding these vehicles remains to be determined, it is recognized that the Town should proactively protect lands for this type of use which may effectively reduce parking needs within its growth and intensification areas.

Implement on-street parking policies: Consideration for on-street parking policies should be developed through further study to prevent GO commuters from parking on quiet residential streets, including clear signage and information on where the appropriate over-flow parking is located.

Implement permitting for on-street parking: provide residents the opportunity to apply for on-street parking permits for accessible users. Further study is required to determine an appropriate solution to site-specific needs.

8 Active Transportation

8.1 Sidewalk Priority Plan

A review of the current 2020 Sidewalk Gap Map as well as Aurora's current 10-year Construction Plan (2016-2027) was undertaken to develop a Sidewalk Priority List that will determine the priority in which the sidewalk gaps within the Town of Aurora should be constructed.

8.1.1 2013 Proposed Sidewalk Gap Priority Plan

In the March 2013 Master Transportation Operations Study Update, a sidewalk Gap Priority Plan was proposed to address sidewalk gaps within the Town of Aurora. The Priority Plan was developed based on the Region's Pedestrian Cycling Master Plan, the Town's Trails Master Plan, the proximity of sidewalk gaps to pedestrian-oriented attractions, road reconstruction program, and the Town's sidewalk installation policy. For a complete list of the sidewalk gaps from 2013, see **Appendix F**. Since 2013, sidewalks have been constructed on Algonquin Crescent, Murray Drive (From Kennedy Street West to Anderson Place), Cousins Drive, Haida Drive, Mary Street, and Bayview Avenue (St. John's Sideroad to Hartwell Way).

8.1.2 Current Sidewalk Gaps

The Town of Aurora released an updated sidewalk Gap Map on January 24, 2020, which illustrates the most up-to-date locations of missing sidewalk links. Along with the map is a list of streets and the proposed year of sidewalk construction. While some construction years are provided, there are many streets that have not yet been assigned. Through this review and evaluation, a priority list will be formulated for the unassigned streets. A copy of the Sidewalk Gap Map is provided in **Appendix G**.

Current Proposed Sidewalk Construction Plan

Based on the Town of Aurora's 2020 Sidewalk Gap Map, **Table 8-1** is a summary of the current proposed construction year for all street projects that are planned to address the existing sidewalk gaps.

Table 8-1: Currently Proposed Sidewalk Gap Construction

STREET NAME	CURRENTLY PROPOSED YEAR OF CONSTRUCTION				Sidewalk Construction Not Approved by Council
	2020	2024	2026	N/A	
Adair Drive					*
Bailey Crescent					*
Baldwin Road					*
Bathurst Street				✓	
Bayview Avenue				✓	
Berczy Street				✓	
Bloomington Road				✓	
Collins Crescent				✓	
Corbett Crescent				✓	
Davidson Road					*
Duncton Wood Crescent				✓	
Harriman Road					*
Henderson Drive					*
Hillview Road				✓	
Holman Crescent					*
Hutchinson Road				✓	
Industrial Parkway North	✓				
Industrial Parkway South (Yonge St. – Engelhard Dr)	✓				
Industry Street		✓			
Johnson Road					*
Kitimat Crescent	✓				
Knowles Crescent				✓	
Leslie Street				✓	
Limeridge Street				✓	
Morning Crescent				✓	
Patrick Drive				✓	
St. John's Sideroad East				✓	
St. John's Sideroad West				✓	
Stoddart Drive				✓	
Webster Drive				✓	
Wellington Street East				✓	
Wellington Street West				✓	
Woodland Hills Boulevard			✓		
Yonge Street	✓				

8.1.3 Recommendations based on Reconstruction Plans

Aurora's 10-year Road Reconstruction Map was also examined to determine if there are any sidewalks that could be constructed at the same time as the road reconstruction. A copy of the 10-year Road Reconstruction Map is provided in **Appendix H.**

Based on the Sidewalk Gap Map, the proposed construction year is not available for Harriman Road. According to the 10-Year Road Reconstruction Map, this segment of Harriman Road will be going through reconstruction in 2019 and is recommended to construct the sidewalk at the same time. However, based on discussion with Town of Aurora Staff, sidewalk construction on Harriman Road is not approved.

Similarly, the sidewalk gap on Industrial Parkway South is proposed to be constructed in the year 2020. However, a segment of this road extending from Yonge Street to Engelhard Drive was planned for reconstruction in 2019. It is recommended to install the sidewalks from Yonge Street to Engelhard Drive with the road reconstruction in 2020.

8.1.4 Sidewalk Gap Evaluation

An evaluation has been conducted to determine the priority in which the remaining sidewalks (that have not yet been assigned a construction date) should be installed. The evaluation was based on connectivity to neighbourhoods, proximity to nearby amenities, and the walk and transit scores generated from walkscore.com. The walk and transit scores are automatically generated by the website as it calculates the distance to nearby places and to transit stops. Each street is given a score between 0 to 100, where a higher score means that the location is more accessible to amenities by walking and to transit stops. However, it is important to note that these scores are based on a specific location and these locations are automatically generated by the website. It is likely that these locations have the highest popularity. This impacts the score reading especially for the regional roads like Bathurst Street, Bayview Avenue, and Yonge Street as they each have a long stretch of missing sidewalk so the scores may vary from one end of these streets to the opposite end.

Based on the evaluation criteria, each street was given a ranking, High, Medium, or Low priority. High priority was assigned if there are possible connections to neighbourhoods, there are amenities within close proximity, and the street was ranked a low walk or transit score. Medium priority was assigned if only one connectivity and proximity criteria is applicable, and if the walk and transit scores are average. Low priority was assigned if none of the criteria are applicable or the street was ranked a high walk or transit score. **Table 8-2** outlines the sidewalk gap evaluation and **Table 8-3** outlines the priority in which the sidewalks should be installed.

Every segment with a high priority assignment is in close proximity to at least one school and is considered to provide significant connection to a neighbourhood. The majority of these locations are in close proximity to a park; notably, Bayview Avenue at Vandorf Sideroad is in close proximity to Holland River Valley Trail. The trail, which is a part of the Nokiidaa Trail System, is an identified route along the Regional Municipality of York's Lake to Lake Cycling Route and Walking Trail, which will connect Lake Simcoe to Lake Ontario. The overview of York Region's Lake to Lake Vision in the Town of Aurora is illustrated in **Appendix I.**

Berczy Street runs parallel to the Metrolinx rail track at the Aurora GO Station. Although this segment is assigned with Medium priority, it should be promoted to High priority if it becomes a critical route to access the GO Transit Station. On both ends of Yonge Street, although these are business areas, they do not provide significant connection to neighborhoods. Therefore, they have been assigned with Medium priority.

Although Hillview Road meets the criteria of being in close proximity to a school and a park and has average walk and transit scores, it has been assigned with Low priority due to the street having a fixed dead-end. There is generally less traffic traveling toward dead-end streets and it is assumed that it is relatively safer to walk in streets with a dead-end, even if sidewalks do not exist.

Table 8-2: Sidewalk Gap Evaluation

STREET NAME	PROPOSED YEAR OF CONSTRUCTION	SIDEWALK GAP LENGTH (in metres)	From	To	Side	Walk Score	Transit Score	Connection to Neighbour-hood	Proximity	Priority
Adair Drive	2020	80.33	Davidson Road/Bailey Crescent	Richardson Drive	North/East	51	45			
Bailey Crescent	2020	231.81	Davidson Road	Adair Drive	West/South	45	45			
Baldwin Road	2020	83.93	Child Drive	Holman Crescent	West	21	36			
Bathurst Street	n/a	6294.82	North Town Limit	Bloomington Road West	East	8	26	No	-	Low
Bayview Avenue	n/a	2294.39	Benville Crescent	Stone Road (north leg)	West	29	35	Yes	School / Trail	Low
	n/a	1771.83	Vandorf Sideroad	Wellington Street East	East					
	n/a	391.36	St. John's Sideroad	North Town Limit	East					
Berczy Street	n/a	160.08	Metcalfe Street	Mosley Street	West	65	51	No	GO Transit Station / Park	Medium
Bloomington Road	n/a	1921.78	Yonge Street	Bayview Avenue	North					Low
	n/a	3175.05	Bayview Avenue	East Town Limit	North					
Collins Crescent	n/a	404.86	Jasper Drive	Jasper Drive	East/South	56	50	Yes	2 Schools / Community Centre / Park	High
Corbett Crescent	n/a	264.84	Springburn Crescent	Murray Drive	West/South	56	44	Yes	2 Schools / Park	High
Davidson Road	2020	344.34	Murray Drive	Adair Drive	East/North	47	44			
Duncton Wood Crescent	n/a	619.00	Woodland Hills Blvd	Woodland Hills Blvd	North/South/West	2	12	No	-	Low
Edward Street	2019	704.98	Yonge Street	Dunning Avenue	East/South	70	51			
Harriman Road	2020	235.78	Wellington Street West	Tyler Street	West	63	51			High
Henderson Drive	2019	678.79	Bathurst Street	Watts Meadow	South	25	38			Low
Hillview Road	n/a	309.52	George Street	West Terminus	South	62	50	No	School / Park	Low
Holman Crescent	2020	390.96	Glass Drive	Baldwin Road	East/North	27	35			
Hutchinson Road	n/a	89.60	Webster Drive / Patrick Drive	Richardson Drive	East	31	41	Yes	2 Schools / Park	High
Industrial Parkway North	2020	1810.55	Centre Street [Wellington St E]*	St John's Sideroad	West	32	48			
Industrial Parkway South	2019	2163.06	Vandorf Sideroad	Industry Street	West	41	48			
		1232.84	Yonge Street	Vandorf Sideroad	Both sides					
Industry Street	2023	88.13	Mary Street	South Terminus	East	56	51			Low
Johnson Road	2020	361.29	Holman Crescent	Baldwin Road	North/South/West	21	38			
Kitimat Crescent	2019	306.47	Tecumseth Drive	Tecumseth Drive	West/North	63	49	Yes	School / Community Centre / Park	High
Knowles Crescent	n/a	520.57	Seaton Drive	Seaton Drive	South/East	15	32	Yes	2 Schools / Park / Retirement Centre	High
Leslie Street	n/a	253.39	Don Hillock Drive	Wellington Street East	East					
	n/a	1029.62	Wellington Street East	State Farm Way	Both sides					
	n/a	3642.81	State Farm Way	North Town Limit	Both sides					Low
Limeridge Street	n/a	343.77	Gateway Drive	Kirkvalley Crescent	East/West/North	53	35	Yes	School / Business Plaza	High
Morning Crescent	n/a	226.64	Seaton Drive	Simmons Crescent	West	17	29	Yes	2 Schools / Park / Retirement Centre	High
Patrick Drive	n/a	342.35	Glass Drive	Hutchinson Road	East/South	47	44	Yes	2 Schools / Park / Retirement Centre	High
St. John's Sideroad West	n/a	4170.75	Yonge Street	Bathurst Street	Both Sides	35	43	No	-	Low
St. John's Sideroad East	n/a	5955.43	Bayview Avenue	East Town Limit	Both sides					
Stoddart Drive	n/a	255.73	Fairway Drive	Nisbet Drive	East	63	46	Yes	2 schools / park / Retirement Centre/ Business Plaza	High
Vandorf Sideroad	n/a	267.00	Bayview Avenue	300 metres east of Bayview Avenue	North					Low
	n/a	95.04	Monkman Court	Bayview Avenue	South					
Webster Drive	n/a	318.97	Patrick Drive	Hutchinson Road	North/South/West	41	42	Yes	2 Schools / Park / Retirement Centre	High
Wellington Street West	n/a	603.95	Bathurst Street	McLeod Drive	North	45	45	No	-	Low
Wellington Street East	n/a	400.43	First Commerce Drive	Aurora Carpool Lot	North					Low
	n/a	2767.14	Bayview Avenue	Aurora Carpool Lot	South					Low
Woodland Hills Boulevard	2026	561.96	Bathurst Street	St John's Sideroad	North/East	3	10			
Yonge Street	n/a	3908.82	Bloomington Road	GO Transit rail bridge	Both sides	84	52	No	Grocery/ Business Plaza	Medium

STREET NAME	PROPOSED YEAR OF CONSTRUCTION	SIDEWALK GAP LENGTH (in metres)	From	To	Side	Walk Score	Transit Score	Connection to Neighbour-hood	Proximity	Priority
	n/a	170.95	GO Transit rail bridge	Henderson Drive	West	84	52	No	Grocery/ Business Plaza	Medium
	n/a	791.97	185 metres north of Batson Drive	St. John's Sideroad	East	84	52	No	St Andrew's College / Business Plaza	Medium
	n/a	166.82	Batson Drive	185 metres north of Batson Drive	East	84	52	No	St Andrew's College / Business Plaza	Medium
	n/a	219.76	170 metres north of St. John's Sideroad	North Town Limit	East	84	52	No	St Andrew's College / Business Plaza	Medium
	n/a	352.11	St. John's Sideroad	North Town Limit	West	84	52	No	St Andrew's College / Business Plaza	Medium
SIDEWALK GAP TOTAL:		***53.78 km***								

** Source of information in square brackets: Town of Aurora's Ten Year Road Reconstruction Map*

Table 8-3: Sidewalk Gap Construction Priority

STREET NAME	CONSTRUCTION PRIORITY		
	High	Medium	Low
Bathurst Street			✓
Bayview Avenue			✓
Berczy Street		✓	
Collins Crescent	✓		
Corbett Crescent	✓		
Duncton Wood Crescent			✓
Hillview Road			✓
Hutchinson Road	✓		
Industry Street			✓
Kitimat Crescent	✓		
Knowles Crescent	✓		
Limeridge Street	✓		
Morning Crescent	✓		
Patrick Drive	✓		
St. John's Sideroad West			✓
Stoddart Drive	✓		
Webster Drive	✓		
Wellington Street West			✓
Yonge Street		✓	

8.1.5 Revised Sidewalk Construction Recommendations

Based on the Sidewalk Gap Map and Aurora's 10-year Road Reconstruction Map, it is recommended that sidewalks along Industrial Parkway South (Yonge Street to Engelhard Drive) be constructed in 2020 along with the planned road reconstruction in order to save on costs.

Based on the evaluation, ten streets have been identified as having high priority for sidewalk installation and should be considered to be included in the 1-5 year plan. The medium to low priority sidewalk installation should be considered to be included in the 5-10 year plan. The revised plan for sidewalk construction is provided in **Table 8-4**.

Table 8-4: Revised Sidewalk Construction Plan

STREET NAME	REVISED PROPOSED YEAR OF CONSTRUCTION						
	2020	HIGH	2024	MEDIUM	2026	LOW	Sidewalk Construction Not Approved by Council
Adair Drive							*
Bailey Crescent							*
Baldwin Road							*
Bathurst Street						✓	
Bayview Avenue						✓	
Berczy Street				✓			
Collins Crescent		✓					
Corbett Crescent		✓					
Davidson Road							*
Duncton Wood Crescent						✓	
Harriman Road							*
Henderson Drive							*
Hillview Road						✓	
Holman Crescent							*
Hutchinson Road		✓					
Industrial Parkway North			✓				
Industrial Parkway South (Yonge St. – Engelhard Dr.)	✓						
Industry Street			✓				
Johnson Road							*
Kitimat Crescent	✓						
Knowles Crescent		✓					
Limeridge Street		✓					
Morning Crescent		✓					
Patrick Drive		✓					
St. John's Sideroad West						✓	
Stoddart Drive		✓					
Webster Drive		✓					
Wellington Street West						✓	
Woodland Hills Boulevard					✓		
Yonge Street				✓			

✓ Current proposed construction
✓ Revised from current proposed construction
✓ **High Priority**
✓ Medium Priority
✓ Low Priority
* Construction Not Approved by Council

8.2 Cycling Facilities

A study was conducted to identify opportunities for new on-street cycling facilities with a focus on appropriately designating space for cyclists between existing curbs, which can be implemented in a cost-effective manner. Recommendations build on the Town's existing and planned cycling network and are supported by a best-practices review of design guidelines including travel and parking lane widths and considerations at intersections.

8.2.1 Cycling Facility Types

The following cycling facility types were considered for implementation:

Bicycle Lanes

Bicycle lanes are on-road facilities designated by pavement markings and signage. Bicycle lanes are typically on the right side of the street between the vehicle travel lane and curb or parking lane, and flow in the same direction of traffic. **Buffered bicycle lanes** offer an enhancement by using painted buffers to provide additional space between motor vehicles and cyclists.

Cycle Tracks

Cycle tracks are an exclusive bicycle facility adjacent to and at the same level as the roadway but separated from motorized traffic by a physical buffer (e.g. planters, bollards, curbs, or a parking lane). They can be bi- or uni-directional and designed to accommodate cyclists on one or both sides of the street. **Raised cycle tracks** are physically separated from motorized traffic by a height difference. They may be at the level of the adjacent sidewalk or at an intermediate level between the roadway and sidewalk.

Multi-Use Trails

Multi-use Trails (MUT) are off-road facilities, fully separated from motorized traffic by a boulevard or paved surface or passing through parks and other natural spaces. They often serve commuter and recreational functions. They are typically shared between pedestrians, cyclists, rollerbladers, and skateboarders.

Shared Lane Markings (Sharrows)

Sharrows are road markings that indicate a shared lane for bicycles and vehicles. It is a pavement marking that indicates a variety of uses to support a complete bikeway network; however, it is not a facility type. Sharrows are typically implemented to reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and maybe configured to offer directional wayfinding guidance. They should not be considered a substitute for bike lanes, cycle tracks, or multi-use trails where these types of facilities are a warranted or space permits.

Urban Shoulder

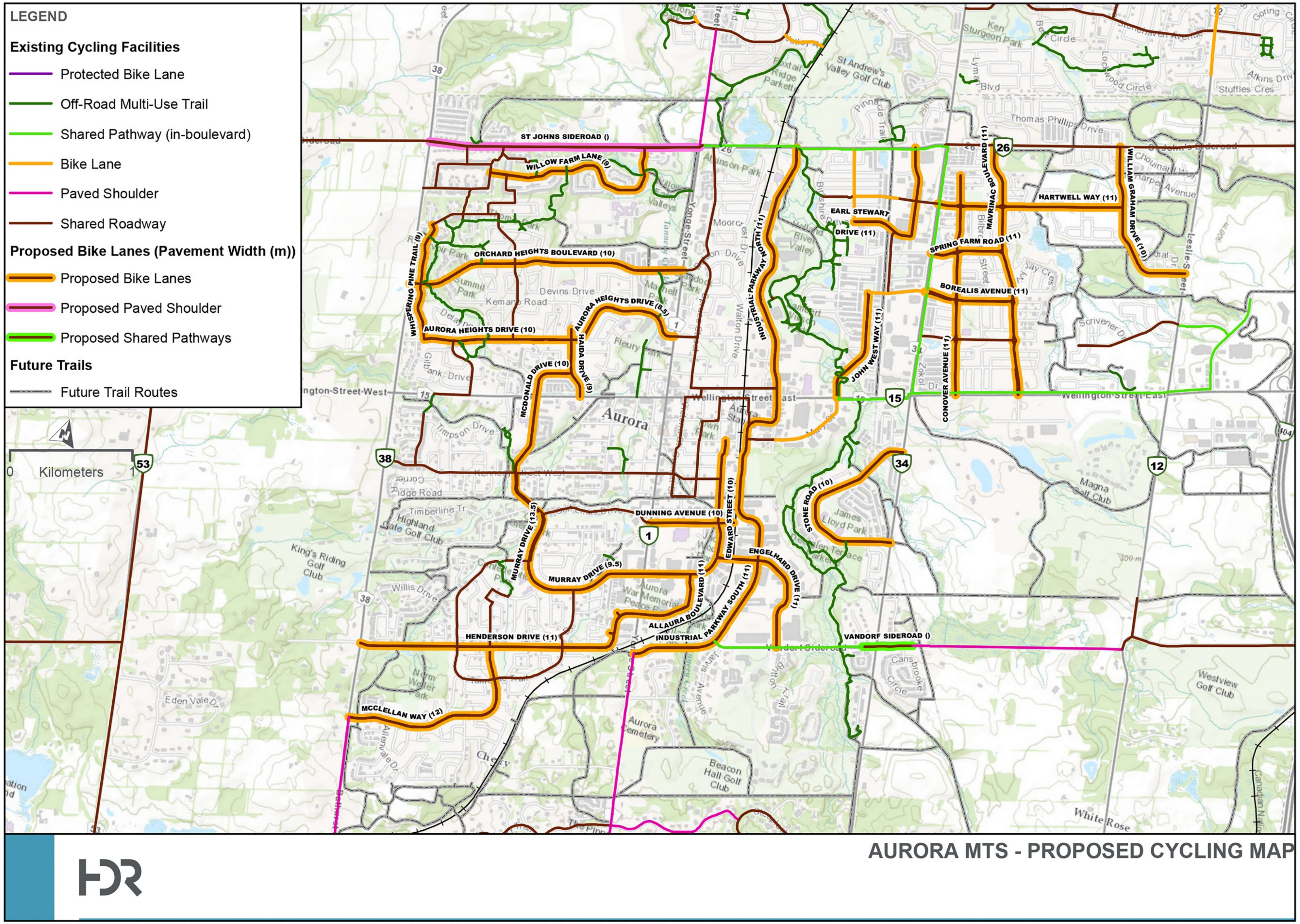
An urban shoulder is a space, delineated by an edge line that a cyclist may ride in instead of riding in the vehicular shared lane where dedicated cycling facilities are not provided. An urban shoulder is not an alternative to a dedicated cycling facility and may be used for snow storage in the winter. Based on the City of Toronto Road Engineering Design Guidelines, the minimum width of an urban shoulder delineated by an edge line shall be 1.2m and may be as wide as 2.3m where space is available.

8.2.2 Recommended Cycling Facilities

The cycling Facility Recommendations Memo, provided in **Appendix J**, outlines the detailed methodology to identify new cycling facilities. Appendix J1 illustrates the recommended cycling facility options for each of the Town's typical residential and industrial right-of-ways. Based on existing pavement width, road type, and vehicle speed and volumes on the road, **Figure 8-1** builds on the existing cycling network in the Town of Aurora and illustrates the recommended cycling facilities.

8.3 Active Transportation Recommendations

It is recommended that the Town of Aurora complete an Active Transportation Master Plan with consideration of the sidewalk and cycling facility recommendations outlined in **Sections 8.1 to 8.2** of this report.



PATH: \\TORE-INFS01\PWEXTERNAL\GIS_PROJECTS\AURORA_MTS_10109507\MAP_DOCS\DRAFT\AURORA_MTS_PROPOSED_CYCLING_FACILITIES.MXD - USER: STMACPHERS - DATE: 12/11/2019

Figure 8-1: Recommended Cycling Facilities

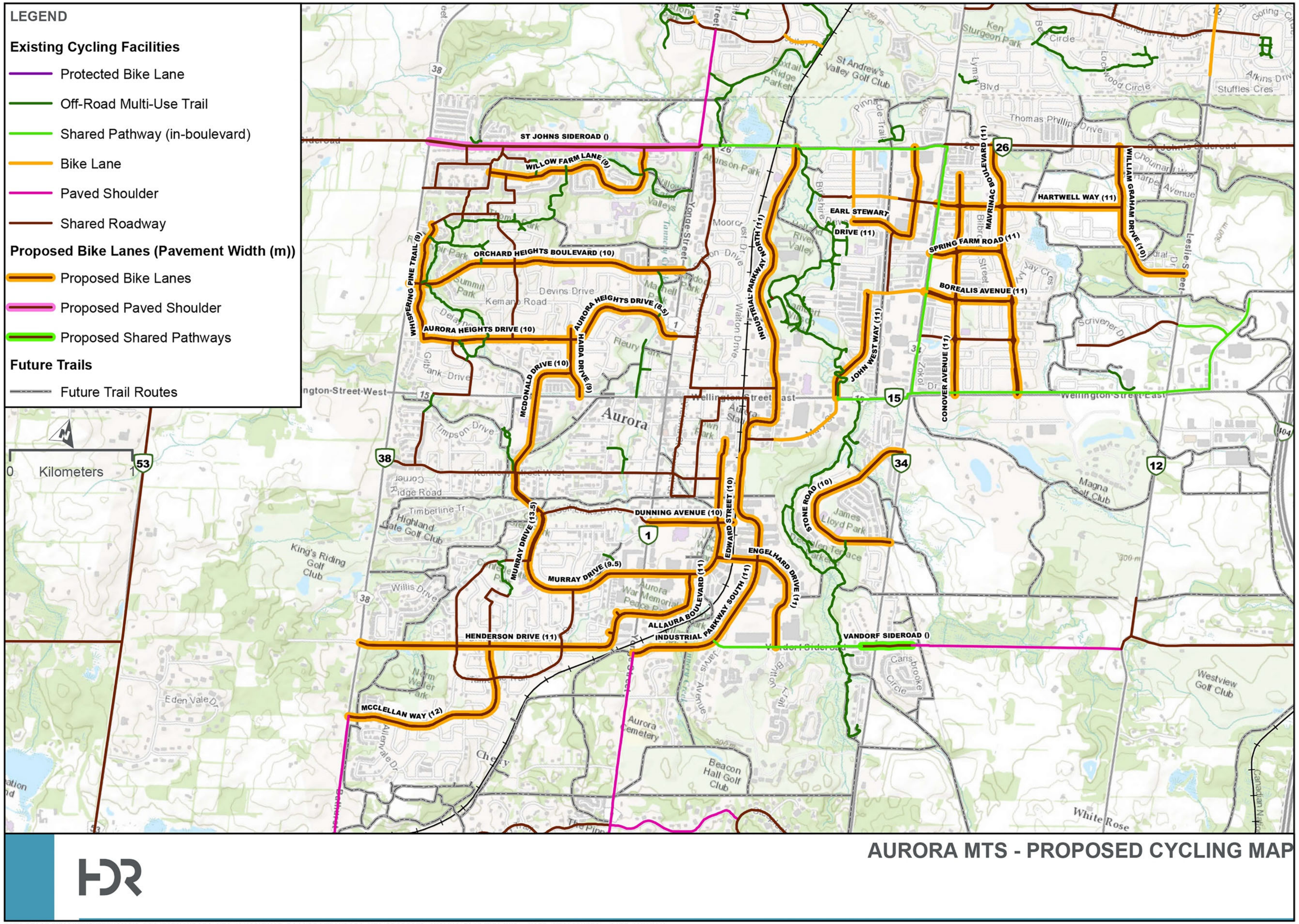


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Figure 8-1: Recommended Cycling Facilities

Appendix A

Existing Traffic Analysis

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Aurora
Site #: 1825300001
Intersection: Yonge St & Orchard Heights Blvd-E
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1257
North Entering: 669
North Peds: 5
Peds Cross: ⋈

Cyclists	1	0	0	1
Trucks	2	21	1	24
Cars	63	542	39	644
Totals	66	563	40	

Cyclists	0
Trucks	24
Cars	564
Totals	588

East Leg Total: 304
East Entering: 166
East Peds: 5
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
3	8	176	187

Cars	Trucks	Cyclists	Totals
53	6	0	59
42	3	2	47
60	0	0	60
155	9	2	

Orchard Heights Blvd

N

W E

S

Batson Dr

Cyclists	Trucks	Cars	Totals
0	4	115	119
2	4	53	59
0	2	70	72
2	10	238	

Cars	Trucks	Cyclists	Totals
131	5	2	138

Yonge St

Peds Cross: ⧗
West Peds: 7
West Entering: 250
West Leg Total: 437

Cars	672
Trucks	23
Cyclists	0
Totals	695

Cars	71	396	39	506
Trucks	3	14	0	17
Cyclists	0	0	0	0
Totals	74	410	39	

Peds Cross: ⋈
South Peds: 14
South Entering: 523
South Leg Total: 1218

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:15:00
To: 13:15:00

Municipality: Aurora
Site #: 1825300001
Intersection: Yonge St & Orchard Heights Blvd-E
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1498
North Entering: 685
North Peds: 5
Peds Cross: ⋈

Cyclists	0	1	0	1
Trucks	0	18	0	18
Cars	95	552	19	666
Totals	95	571	19	

Cyclists	1
Trucks	21
Cars	791
Totals	813

East Leg Total: 193
East Entering: 96
East Peds: 6
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	5	277	282

Orchard Heights Blvd

Cars	Trucks	Cyclists	Totals
26	1	0	27
40	0	0	40
29	0	0	29
95	1	0	

N

W E

S

Batson Dr

Cyclists	Trucks	Cars	Totals
0	1	168	169
0	0	40	40
0	0	127	127
0	1	335	

Cars	Trucks	Cyclists	Totals
96	1	0	97

Yonge St

Peds Cross: ⧗
West Peds: 7
West Entering: 336
West Leg Total: 618

Cars	708
Trucks	18
Cyclists	1
Totals	727

Cars	142	597	37	776
Trucks	5	19	1	25
Cyclists	0	1	0	1
Totals	147	617	38	

Peds Cross: ⋈
South Peds: 15
South Entering: 802
South Leg Total: 1529

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period		**One Hour Peak**	
From:	15:30:00	**From:**	16:45:00
To:	18:30:00	**To:**	17:45:00

Municipality: Aurora
Site #: 1825300001
Intersection: Yonge St & Orchard Heights Blvd-E
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

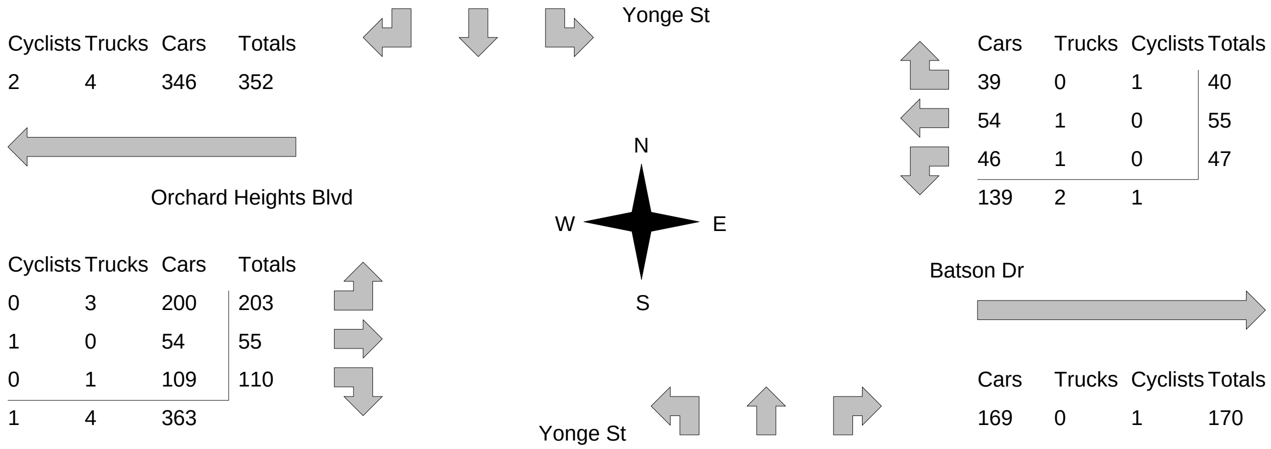
Major Road: Yonge St runs N/S

North Leg Total:	1801
North Entering:	744
North Peds:	7
Peds Cross:	⋈

Cyclists	2	2	0	4
Trucks	0	17	0	17
Cars	139	551	33	723
Totals	141	570	33	

Cyclists	3
Trucks	19
Cars	1035
Totals	1057

East Leg Total:	312
East Entering:	142
East Peds:	8
Peds Cross:	⧗



Cyclists	Trucks	Cars	Totals
2	4	346	352

Cars	Trucks	Cyclists	Totals
39	0	1	40
54	1	0	55
46	1	0	47
139	2	1	

Cyclists	Trucks	Cars	Totals
0	3	200	203
1	0	54	55
0	1	109	110
1	4	363	

Cars	Trucks	Cyclists	Totals
169	0	1	170

Peds Cross:	⧗
West Peds:	17
West Entering:	368
West Leg Total:	720

Cars	706
Trucks	19
Cyclists	2
Totals	727

Cars	153	796	82	1031
Trucks	3	16	0	19
Cyclists	0	2	0	2
Totals	156	814	82	

Peds Cross:	⋈
South Peds:	23
South Entering:	1052
South Leg Total:	1779

Comments

Ontario Traffic Inc.

Total Count Diagram

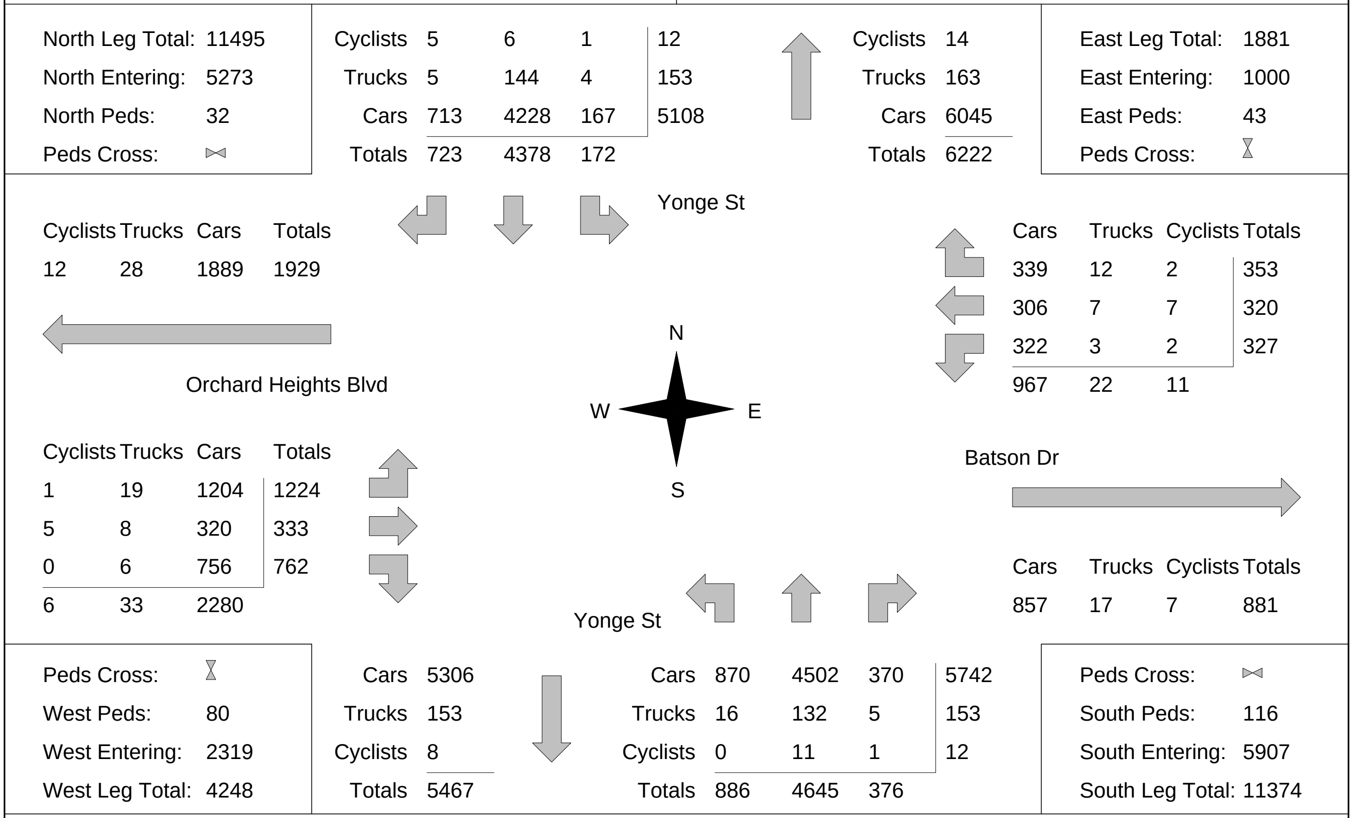
Municipality: Aurora
Site #: 1825300001
Intersection: Yonge St & Orchard Heights Blvd-E
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 11495
North Entering: 5273
North Peds: 32
Peds Cross: ⋈

Cyclists	5	6	1	12
Trucks	5	144	4	153
Cars	713	4228	167	5108
Totals	723	4378	172	

Cyclists	14
Trucks	163
Cars	6045
Totals	6222

East Leg Total: 1881
East Entering: 1000
East Peds: 43
Peds Cross: ⧗

Cyclists	Trucks	Cars	Totals
12	28	1889	1929

Cars	Trucks	Cyclists	Totals
339	12	2	353
306	7	7	320
322	3	2	327
967	22	11	

Cyclists	Trucks	Cars	Totals
1	19	1204	1224
5	8	320	333
0	6	756	762
6	33	2280	

Cars	Trucks	Cyclists	Totals
857	17	7	881

Peds Cross: ⧗
West Peds: 80
West Entering: 2319
West Leg Total: 4248

Cars	5306
Trucks	153
Cyclists	8
Totals	5467

Cars	870	4502	370	5742
Trucks	16	132	5	153
Cyclists	0	11	1	12
Totals	886	4645	376	

Peds Cross: ⋈
South Peds: 116
South Entering: 5907
South Leg Total: 11374

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Orchard Heights Blvd- **Count Date:** 27-Jun-18 **Municipality:** Aurora

North Approach Totals							South Approach Totals					
	Includes Cars, Trucks, & Cyclists					North/South Total Approaches		Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	9	528	46	583	2	941	8:00:00	24	323	11	358	8
9:00:00	34	594	64	692	6	1176	9:00:00	62	391	31	484	11
10:00:00	18	439	71	528	0	1088	10:00:00	86	440	34	560	14
12:00:00	8	264	47	319	2	683	12:00:00	65	275	24	364	3
13:00:00	15	572	90	677	3	1503	13:00:00	142	641	43	826	10
16:00:00	16	540	107	663	6	1508	16:00:00	136	664	45	845	16
17:00:00	27	587	108	722	8	1703	17:00:00	150	748	83	981	22
18:00:00	32	577	131	740	5	1784	18:00:00	156	811	77	1044	22
Totals:	159	4101	664	4924	32	10386		821	4293	348	5462	106

East Approach Totals							West Approach Totals					
	Includes Cars, Trucks, & Cyclists					East/West Total Approaches		Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	38	23	33	94	10	276	8:00:00	96	16	70	182	3
9:00:00	59	46	50	155	5	413	9:00:00	129	63	66	258	12
10:00:00	40	19	59	118	2	360	10:00:00	118	30	94	242	6
12:00:00	21	14	14	49	2	203	12:00:00	68	29	57	154	5
13:00:00	31	35	21	87	3	396	13:00:00	158	38	113	309	9
16:00:00	33	62	57	152	5	486	16:00:00	172	47	115	334	9
17:00:00	43	47	52	142	10	468	17:00:00	180	37	109	326	14
18:00:00	45	46	43	134	5	493	18:00:00	209	57	93	359	17
Totals:	310	292	329	931	42	3095		1130	317	717	2164	75

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	167	268	202	123	240	289	300	338

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300001**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	114	114	9	9	0	0	6	6	1	1	0	0	0	0	0	0	2	2
7:30:00	2	2	232	118	17	8	0	0	10	4	1	0	0	0	0	0	0	0	2	0
7:45:00	5	3	371	139	29	12	1	1	15	5	2	1	0	0	0	0	0	0	2	0
8:00:00	8	3	508	137	43	14	1	0	20	5	2	0	0	0	0	0	1	1	2	0
8:15:00	14	6	666	158	55	12	1	0	23	3	3	1	0	0	0	0	1	0	3	1
8:30:00	21	7	822	156	68	13	1	0	26	3	3	0	0	0	0	0	1	0	5	2
8:45:00	32	11	959	137	87	19	2	1	34	8	5	2	0	0	0	0	2	1	5	0
9:00:00	41	9	1086	127	103	16	2	0	36	2	5	0	0	0	0	0	2	0	8	3
9:15:00	53	12	1208	122	118	15	2	0	44	8	5	0	0	0	0	0	2	0	8	0
9:30:00	54	1	1305	97	138	20	2	0	48	4	5	0	0	0	1	1	2	0	8	0
9:45:00	55	1	1403	98	150	12	2	0	52	4	5	0	0	0	1	0	2	0	8	0
10:00:00	59	4	1505	102	174	24	2	0	55	3	5	0	0	0	1	0	2	0	8	0
10:01:48	59	0	1505	0	174	0	2	0	55	0	5	0	0	0	1	0	2	0	8	0
11:30:00	59	0	1505	0	174	0	2	0	55	0	5	0	0	0	1	0	2	0	8	0
11:45:00	61	2	1609	104	199	25	2	0	63	8	5	0	0	0	1	0	2	0	10	2
12:00:00	67	6	1756	147	221	22	2	0	68	5	5	0	0	0	1	0	2	0	10	0
12:15:00	67	0	1903	147	244	23	2	0	71	3	5	0	0	0	1	0	2	0	11	1
12:30:00	71	4	2051	148	268	24	2	0	75	4	5	0	0	0	1	0	2	0	11	0
12:45:00	78	7	2182	131	290	22	2	0	78	3	5	0	0	0	2	1	2	0	12	1
13:00:00	82	4	2313	131	311	21	2	0	82	4	5	0	0	0	2	0	2	0	13	1
13:15:00	86	4	2455	142	339	28	2	0	89	7	5	0	0	0	2	0	2	0	16	3
13:30:00	88	2	2596	141	366	27	2	0	98	9	5	0	0	0	2	0	2	0	19	3
13:31:19	88	0	2596	0	366	0	2	0	98	0	5	0	0	0	2	0	2	0	19	0
15:30:00	88	0	2596	0	366	0	2	0	98	0	5	0	0	0	2	0	2	0	19	0
15:45:00	94	6	2719	123	388	22	3	1	100	2	5	0	0	0	3	1	2	0	19	0
16:00:00	97	3	2828	109	418	30	3	0	105	5	5	0	0	0	4	1	2	0	19	0
16:15:00	105	8	2970	142	441	23	3	0	107	2	5	0	0	0	4	0	3	1	21	2
16:30:00	113	8	3120	150	464	23	4	1	110	3	5	0	0	0	4	0	3	0	24	3
16:45:00	117	4	3268	148	488	24	4	0	116	6	5	0	0	0	4	0	3	0	25	1
17:00:00	123	6	3400	132	525	37	4	0	119	3	5	0	0	0	5	1	3	0	27	2
17:15:00	134	11	3538	138	552	27	4	0	126	7	5	0	0	0	6	1	3	0	29	2
17:30:00	145	11	3682	144	586	34	4	0	127	1	5	0	0	0	6	0	5	2	30	1
17:45:00	150	5	3819	137	627	41	4	0	133	6	5	0	0	0	6	0	5	0	32	2
18:00:00	154	4	3959	140	654	27	4	0	136	3	5	0	1	1	6	0	5	0	32	0
18:15:00	161	7	4089	130	676	22	4	0	139	3	5	0	1	0	6	0	5	0	32	0
18:30:00	167	6	4228	139	713	37	4	0	144	5	5	0	1	0	6	0	5	0	32	0
18:45:00	167	0	4228	0	713	0	4	0	144	0	5	0	1	0	6	0	5	0	32	0
18:46:38	167	0	4228	0	713	0	4	0	144	0	5	0	1	0	6	0	5	0	32	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	3	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	3	3
7:30:00	16	6	7	4	7	3	1	1	0	0	0	0	0	0	0	0	0	0	4	1
7:45:00	26	10	15	8	21	14	1	0	0	0	0	0	0	0	0	0	0	0	10	6
8:00:00	37	11	23	8	33	12	1	0	0	0	0	0	0	0	0	0	0	0	10	0
8:15:00	53	16	29	6	47	14	1	0	1	1	0	0	0	0	0	0	0	0	11	1
8:30:00	67	14	39	10	59	12	1	0	1	0	0	0	0	0	1	1	0	0	12	1
8:45:00	80	13	49	10	69	10	1	0	3	2	0	0	0	0	1	0	0	0	14	2
9:00:00	96	16	64	15	81	12	1	0	3	0	2	2	0	0	2	1	0	0	15	1
9:15:00	113	17	71	7	100	19	1	0	4	1	6	4	0	0	2	0	0	0	16	1
9:30:00	121	8	75	4	117	17	1	0	4	0	6	0	0	0	2	0	0	0	17	1
9:45:00	127	6	76	1	125	8	1	0	4	0	6	0	0	0	2	0	0	0	17	0
10:00:00	136	9	82	6	136	11	1	0	4	0	6	0	0	0	2	0	0	0	17	0
10:01:48	136	0	82	0	136	0	1	0	4	0	6	0	0	0	2	0	0	0	17	0
11:30:00	136	0	82	0	136	0	1	0	4	0	6	0	0	0	2	0	0	0	17	0
11:45:00	147	11	85	3	143	7	1	0	4	0	6	0	0	0	2	0	0	0	19	2
12:00:00	157	10	93	8	150	7	1	0	4	0	6	0	0	0	5	3	0	0	19	0
12:15:00	167	10	99	6	151	1	1	0	5	1	6	0	0	0	6	1	0	0	19	0
12:30:00	172	5	106	7	160	9	1	0	5	0	6	0	0	0	6	0	0	0	20	1
12:45:00	181	9	115	9	162	2	1	0	5	0	6	0	0	0	6	0	0	0	20	0
13:00:00	188	7	126	11	170	8	1	0	5	0	7	1	0	0	6	0	0	0	22	2
13:15:00	196	8	139	13	177	7	1	0	5	0	7	0	0	0	6	0	0	0	25	3
13:30:00	201	5	146	7	187	10	1	0	5	0	7	0	0	0	6	0	0	0	27	2
13:31:19	201	0	146	0	187	0	1	0	5	0	7	0	0	0	6	0	0	0	27	0
15:30:00	201	0	146	0	187	0	1	0	5	0	7	0	0	0	6	0	0	0	27	0
15:45:00	208	7	163	17	204	17	1	0	5	0	7	0	0	0	6	0	0	0	27	0
16:00:00	220	12	187	24	223	19	1	0	6	1	11	4	1	1	6	0	0	0	27	0
16:15:00	231	11	199	12	235	12	1	0	6	0	11	0	1	0	6	0	0	0	29	2
16:30:00	237	6	209	10	255	20	1	0	6	0	12	1	1	0	6	0	0	0	32	3
16:45:00	249	12	215	6	265	10	1	0	6	0	12	0	2	1	6	0	0	0	34	2
17:00:00	261	12	234	19	274	9	2	1	6	0	12	0	2	0	6	0	0	0	37	3
17:15:00	275	14	239	5	284	10	2	0	6	0	12	0	2	0	6	0	0	0	41	4
17:30:00	282	7	257	18	293	9	2	0	7	1	12	0	2	0	6	0	1	1	42	1
17:45:00	295	13	269	12	304	11	2	0	7	0	12	0	2	0	6	0	1	0	42	0
18:00:00	305	10	279	10	316	12	3	1	7	0	12	0	2	0	6	0	1	0	42	0
18:15:00	314	9	294	15	328	12	3	0	7	0	12	0	2	0	6	0	1	0	43	1
18:30:00	322	8	306	12	339	11	3	0	7	0	12	0	2	0	7	1	2	1	43	0
18:45:00	322	0	306	0	339	0	3	0	7	0	12	0	2	0	7	0	2	0	43	0
18:46:38	322	0	306	0	339	0	3	0	7	0	12	0	2	0	7	0	2	0	43	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300001**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	63	63	0	0	0	0	4	4	0	0	0	0	0	0	0	0	2	2
7:30:00	9	4	133	70	0	0	0	0	8	4	0	0	0	0	0	0	0	0	5	3
7:45:00	16	7	218	85	2	2	0	0	12	4	0	0	0	0	1	1	0	0	7	2
8:00:00	24	8	306	88	10	8	0	0	15	3	1	1	0	0	2	1	0	0	8	1
8:15:00	36	12	395	89	13	3	0	0	20	5	1	0	0	0	3	1	0	0	8	0
8:30:00	49	13	489	94	25	12	0	0	23	3	1	0	0	0	3	0	0	0	10	2
8:45:00	64	15	577	88	30	5	0	0	26	3	1	0	0	0	3	0	0	0	16	6
9:00:00	86	22	679	102	41	11	0	0	32	6	1	0	0	0	3	0	0	0	19	3
9:15:00	107	21	791	112	52	11	3	3	34	2	1	0	0	0	3	0	0	0	22	3
9:30:00	125	18	893	102	65	13	3	0	41	7	1	0	0	0	3	0	0	0	22	0
9:45:00	149	24	994	101	70	5	4	1	46	5	1	0	0	0	3	0	0	0	29	7
10:00:00	167	18	1102	108	75	5	5	1	49	3	1	0	0	0	3	0	0	0	33	4
10:01:48	167	0	1102	0	75	0	5	0	49	0	1	0	0	0	3	0	0	0	33	0
11:30:00	167	0	1102	0	75	0	5	0	49	0	1	0	0	0	3	0	0	0	33	0
11:45:00	201	34	1227	125	89	14	5	0	52	3	2	1	0	0	3	0	0	0	36	3
12:00:00	232	31	1369	142	98	9	5	0	57	5	2	0	0	0	3	0	0	0	36	0
12:15:00	264	32	1532	163	110	12	5	0	61	4	2	0	0	0	3	0	0	0	38	2
12:30:00	308	44	1692	160	118	8	8	3	64	3	2	0	0	0	3	0	0	0	40	2
12:45:00	332	24	1852	160	128	10	10	2	68	4	2	0	0	0	4	1	0	0	43	3
13:00:00	369	37	1991	139	140	12	10	0	75	7	3	1	0	0	4	0	0	0	46	3
13:15:00	406	37	2129	138	147	7	10	0	80	5	3	0	0	0	4	0	0	0	53	7
13:30:00	435	29	2286	157	157	10	11	1	82	2	4	1	0	0	5	1	0	0	56	3
13:31:19	435	0	2286	0	157	0	11	0	82	0	4	0	0	0	5	0	0	0	56	0
15:30:00	435	0	2286	0	157	0	11	0	82	0	4	0	0	0	5	0	0	0	56	0
15:45:00	468	33	2456	170	172	15	11	0	86	4	4	0	0	0	5	0	0	0	57	1
16:00:00	504	36	2638	182	184	12	11	0	91	5	4	0	0	0	5	0	0	0	62	5
16:15:00	546	42	2814	176	208	24	11	0	96	5	4	0	0	0	8	3	0	0	65	3
16:30:00	583	37	2978	164	231	23	11	0	99	3	5	1	0	0	8	0	0	0	66	1
16:45:00	621	38	3174	196	243	12	11	0	104	5	5	0	0	0	8	0	0	0	79	13
17:00:00	654	33	3367	193	266	23	11	0	107	3	5	0	0	0	8	0	0	0	84	5
17:15:00	696	42	3586	219	290	24	12	1	112	5	5	0	0	0	8	0	0	0	94	10
17:30:00	735	39	3792	206	309	19	13	1	116	4	5	0	0	0	8	0	0	0	97	3
17:45:00	774	39	3970	178	325	16	14	1	120	4	5	0	0	0	10	2	0	0	102	5
18:00:00	807	33	4158	188	342	17	14	0	124	4	5	0	0	0	11	1	1	1	106	4
18:15:00	847	40	4342	184	354	12	16	2	128	4	5	0	0	0	11	0	1	0	110	4
18:30:00	870	23	4502	160	370	16	16	0	132	4	5	0	0	0	11	0	1	0	116	6
18:45:00	870	0	4502	0	370	0	16	0	132	0	5	0	0	0	11	0	1	0	116	0
18:46:38	870	0	4502	0	370	0	16	0	132	0	5	0	0	0	11	0	1	0	116	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	12	12	1	1	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	27	15	4	3	29	16	1	1	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	58	31	9	5	47	18	1	0	0	0	0	0	0	0	0	0	0	0	2	2
8:00:00	94	36	16	7	70	23	2	1	0	0	0	0	0	0	0	0	0	0	3	1
8:15:00	129	35	30	14	86	16	3	1	0	0	0	0	1	1	0	0	0	0	8	5
8:30:00	153	24	38	8	99	13	3	0	1	1	0	0	1	0	0	0	0	0	9	1
8:45:00	186	33	54	16	116	17	4	1	2	1	0	0	1	0	1	1	0	0	13	4
9:00:00	218	32	73	19	135	19	6	2	4	2	1	1	1	0	2	1	0	0	15	2
9:15:00	244	26	83	10	156	21	7	1	4	0	2	1	1	0	2	0	0	0	15	0
9:30:00	269	25	88	5	180	24	8	1	4	0	3	1	1	0	2	0	0	0	16	1
9:45:00	303	34	95	7	201	21	8	0	4	0	4	1	1	0	2	0	0	0	18	2
10:00:00	334	31	102	7	226	25	8	0	4	0	4	0	1	0	3	1	0	0	21	3
10:01:48	334	0	102	0	226	0	8	0	4	0	4	0	1	0	3	0	0	0	21	0
11:30:00	334	0	102	0	226	0	8	0	4	0	4	0	1	0	3	0	0	0	21	0
11:45:00	368	34	114	12	253	27	9	1	4	0	4	0	1	0	3	0	0	0	25	4
12:00:00	401	33	130	16	283	30	9	0	5	1	4	0	1	0	3	0	0	0	26	1
12:15:00	427	26	138	8	304	21	9	0	5	0	4	0	1	0	3	0	0	0	29	3
12:30:00	466	39	148	10	340	36	9	0	5	0	4	0	1	0	3	0	0	0	29	0
12:45:00	506	40	159	11	363	23	9	0	5	0	4	0	1	0	3	0	0	0	32	3
13:00:00	558	52	168	9	396	33	10	1	5	0	4	0	1	0	3	0	0	0	35	3
13:15:00	595	37	178	10	431	35	10	0	5	0	4	0	1	0	3	0	0	0	36	1
13:30:00	642	47	186	8	456	25	10	0	5	0	5	1	1	0	3	0	0	0	39	3
13:31:19	642	0	186	0	456	0	10	0	5	0	5	0	1	0	3	0	0	0	39	0
15:30:00	642	0	186	0	456	0	10	0	5	0	5	0	1	0	3	0	0	0	39	0
15:45:00	687	45	201	15	482	26	11	1	8	3	5	0	1	0	3	0	0	0	40	1
16:00:00	728	41	212	11	510	28	12	1	8	0	5	0	1	0	3	0	0	0	44	4
16:15:00	766	38	217	5	543	33	12	0	8	0	5	0	1	0	3	0	0	0	45	1
16:30:00	818	52	229	12	564	21	13	1	8	0	5	0	1	0	3	0	0	0	47	2
16:45:00	863	45	236	7	580	16	14	1	8	0	5	0	1	0	3	0	0	0	56	9
17:00:00	906	43	249	13	618	38	14	0	8	0	6	1	1	0	3	0	0	0	58	2
17:15:00	960	54	263	14	644	26	15	1	8	0	6	0	1	0	4	1	0	0	61	3
17:30:00	1015	55	276	13	665	21	16	1	8	0	6	0	1	0	4	0	0	0	68	7
17:45:00	1063	48	290	14	689	24	17	1	8	0	6	0	1	0	4	0	0	0	73	5
18:00:00	1112	49	305	15	711	22	17	0	8	0	6	0	1	0	4	0	0	0	75	2
18:15:00	1159	47	310	5	738	27	18	1	8	0	6	0	1	0	5	1	0	0	79	4
18:30:00	1204	45	320	10	756	18	19	1	8	0	6	0	1	0	5	0	0	0	80	1
18:45:00	1204	0	320	0	756	0	19	0	8	0	6	0	1	0	5	0	0	0	80	0
18:46:38	1204	0	320	0	756	0	19	0	8	0	6	0	1	0	5	0	0	0	80	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Aurora
Site #: 1825300002
Intersection: Yonge St & Aurora Heights Blvd-Ma
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs W/E

North Leg Total: 1223
North Entering: 689
North Peds: 3
Peds Cross: ⋈

Cyclists	0	1	0	1
Trucks	1	21	1	23
Cars	64	569	32	665
Totals	65	591	33	
	↲	↓	↳	

↑

Cyclists	1
Trucks	17
Cars	516
Totals	534

East Leg Total: 298
East Entering: 144
East Peds: 7
Peds Cross: ⧗

Aurora Heights Blvd-Mark St

Cyclists	Trucks	Cars	Totals
4	7	188	199

←

Aurora Heights Blvd

	Cars	Trucks	Cyclists	Totals
↰	33	1	0	34
←	58	4	4	66
↲	39	5	0	44
	130	10	4	

N
W E
S

Cyclists	Trucks	Cars	Totals	
0	2	68	70	↱
0	3	68	71	→
0	1	89	90	↳
0	6	225		

Mark St

→

Cars	Trucks	Cyclists	Totals
148	6	0	154

Aurora Heights Blvd-Mark St

↰ ↑ ↱

Peds Cross: ⧗
West Peds: 4
West Entering: 231
West Leg Total: 430

Cars	697
Trucks	27
Cyclists	1
Totals	725

↓

Cars	66	415	48	529
Trucks	2	14	2	18
Cyclists	0	1	0	1
Totals	68	430	50	

Peds Cross: ⋈
South Peds: 9
South Entering: 548
South Leg Total: 1273

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:00:00
To: 13:00:00

Municipality: Aurora
Site #: 1825300002
Intersection: Yonge St & Aurora Heights Blvd-Ma
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs W/E

North Leg Total:	1555
North Entering:	724
North Peds:	15
Peds Cross:	⋈

Cyclists	0	2	0	2
Trucks	1	12	0	13
Cars	78	597	34	709
Totals	79	611	34	

Cyclists	1
Trucks	22
Cars	808
Totals	831

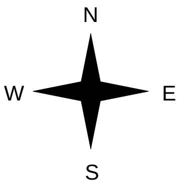
East Leg Total:	224
East Entering:	102
East Peds:	8
Peds Cross:	⧗

Aurora Heights Blvd-Mark St

Cyclists	Trucks	Cars	Totals
0	2	235	237

Aurora Heights Blvd

Cars	Trucks	Cyclists	Totals
31	0	0	31
47	1	0	48
23	0	0	23
101	1	0	



Mark St

Cyclists	Trucks	Cars	Totals
0	0	96	96
0	0	49	49
0	1	67	68
0	1	212	

Cars	Trucks	Cyclists	Totals
122	0	0	122

Aurora Heights Blvd-Mark St

Peds Cross:	⧗
West Peds:	12
West Entering:	213
West Leg Total:	450

Cars	687
Trucks	13
Cyclists	2
Totals	702

Cars	110	681	39	830
Trucks	0	22	0	22
Cyclists	0	1	0	1
Totals	110	704	39	

Peds Cross:	⋈
South Peds:	14
South Entering:	853
South Leg Total:	1555

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:30:00
To: 17:30:00

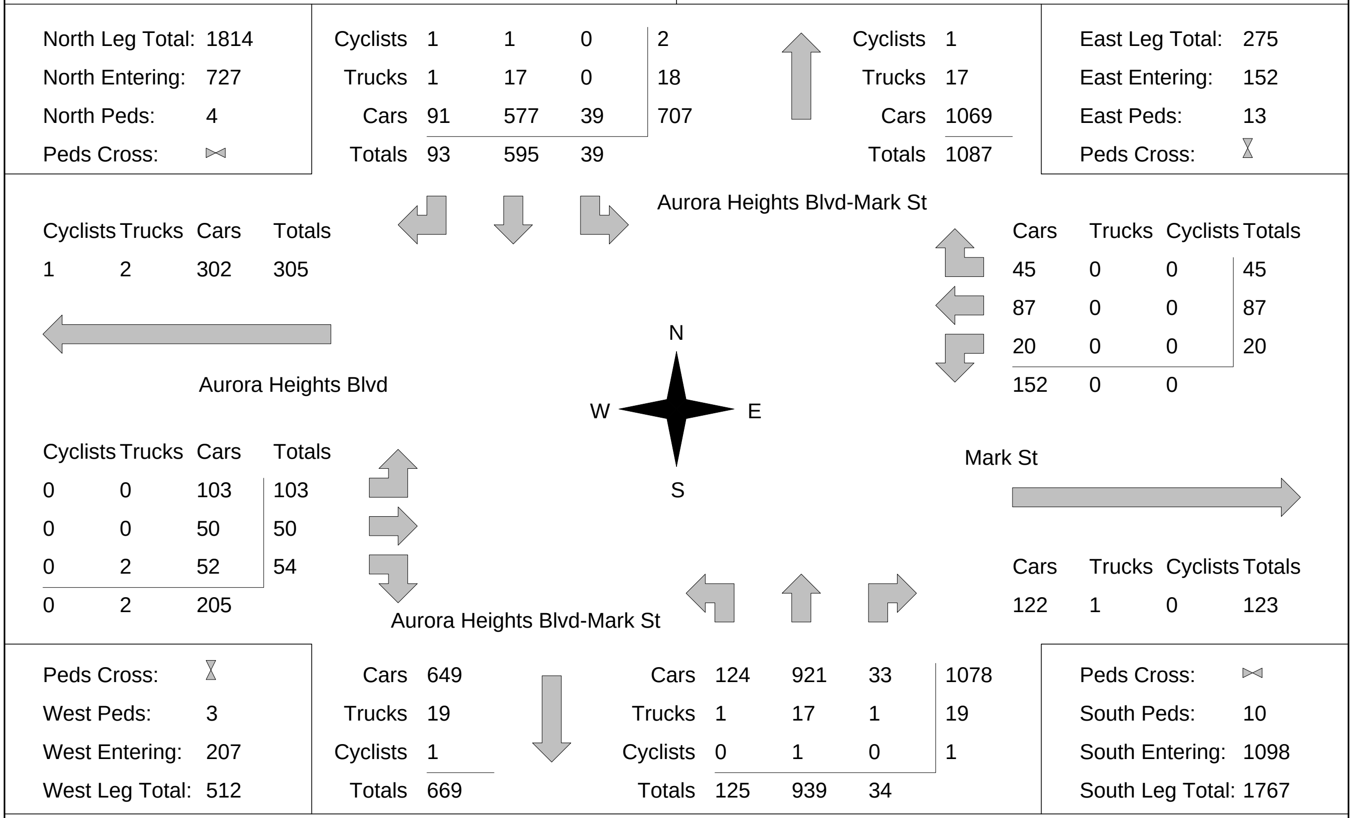
Municipality: Aurora
Site #: 1825300002
Intersection: Yonge St & Aurora Heights Blvd-Ma
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs W/E



North Leg Total: 1814
North Entering: 727
North Peds: 4
Peds Cross: ⋈

Cyclists	1	1	0	2
Trucks	1	17	0	18
Cars	91	577	39	707
Totals	93	595	39	

Cyclists	1
Trucks	17
Cars	1069
Totals	1087

East Leg Total: 275
East Entering: 152
East Peds: 13
Peds Cross: ⧗

Cyclists	Trucks	Cars	Totals
1	2	302	305

Cars	Trucks	Cyclists	Totals
45	0	0	45
87	0	0	87
20	0	0	20
152	0	0	

Cyclists	Trucks	Cars	Totals
0	0	103	103
0	0	50	50
0	2	52	54
0	2	205	

Cars	Trucks	Cyclists	Totals
122	1	0	123

Peds Cross: ⧗
West Peds: 3
West Entering: 207
West Leg Total: 512

Cars	649
Trucks	19
Cyclists	1
Totals	669

Cars	124	921	33	1078
Trucks	1	17	1	19
Cyclists	0	1	0	1
Totals	125	939	34	

Peds Cross: ⋈
South Peds: 10
South Entering: 1098
South Leg Total: 1767

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Aurora
Site #: 1825300002
Intersection: Yonge St & Aurora Heights Blvd-Ma
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

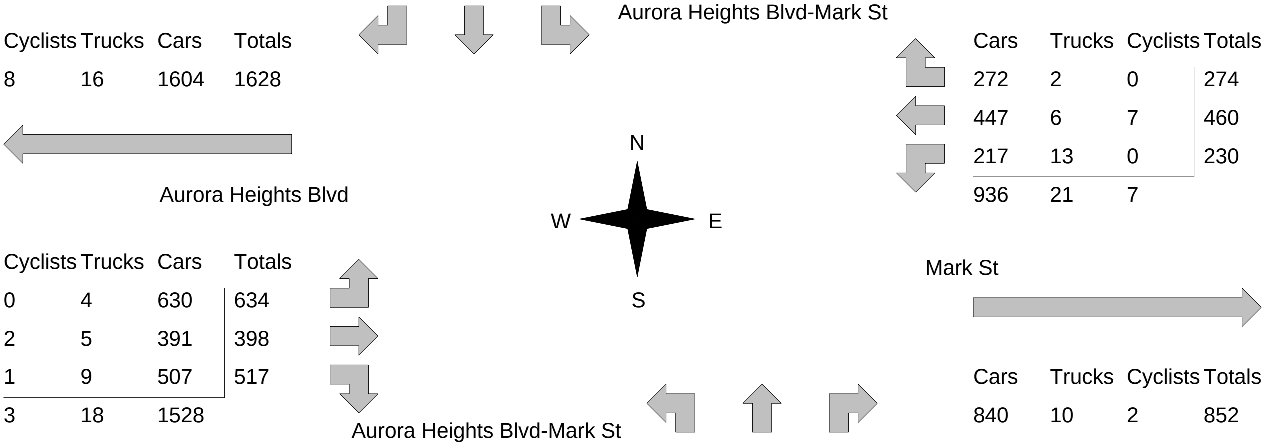
Major Road: Yonge St runs W/E

North Leg Total: 11434
North Entering: 5474
North Peds: 50
Peds Cross: ⋈

Cyclists	1	9	0	10
Trucks	3	145	1	149
Cars	546	4544	225	5315
Totals	550	4698	226	

Cyclists	11
Trucks	144
Cars	5805
Totals	5960

East Leg Total: 1816
East Entering: 964
East Peds: 68
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
8	16	1604	1628

Aurora Heights Blvd

Cars	Trucks	Cyclists	Totals
272	2	0	274
447	6	7	460
217	13	0	230
936	21	7	

Cyclists	Trucks	Cars	Totals
0	4	630	634
2	5	391	398
1	9	507	517
3	18	1528	

Mark St

Cars	Trucks	Cyclists	Totals
840	10	2	852

Aurora Heights Blvd-Mark St

Peds Cross: ⧗
West Peds: 53
West Entering: 1549
West Leg Total: 3177

Cars	5268
Trucks	167
Cyclists	10
Totals	5445

Cars	611	4903	224	5738
Trucks	7	138	4	149
Cyclists	0	11	0	11
Totals	618	5052	228	

Peds Cross: ⋈
South Peds: 80
South Entering: 5898
South Leg Total: 11343

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Aurora Heights Blvd-M **Count Date:** 27-Jun-18 **Municipality:** Aurora

North Approach Totals							South Approach Totals					
	Includes Cars, Trucks, & Cyclists					North/South Total Approaches		Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	16	622	20	658	4	991	8:00:00	23	303	7	333	1
9:00:00	26	615	65	706	2	1224	9:00:00	66	406	46	518	6
10:00:00	30	494	39	563	4	1111	10:00:00	43	480	25	548	8
12:00:00	12	303	35	350	3	694	12:00:00	23	314	7	344	2
13:00:00	34	611	79	724	15	1577	13:00:00	110	704	39	853	14
16:00:00	26	579	74	679	16	1493	16:00:00	77	704	33	814	25
17:00:00	31	597	103	731	3	1737	17:00:00	103	874	29	1006	13
18:00:00	37	586	87	710	1	1747	18:00:00	109	896	32	1037	9
Totals:	212	4407	502	5121	48	10574		554	4681	218	5453	78

East Approach Totals							West Approach Totals					
	Includes Cars, Trucks, & Cyclists					East/West Total Approaches		Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	34	21	14	69	5	215	8:00:00	44	37	65	146	1
9:00:00	41	58	26	125	4	333	9:00:00	66	74	68	208	3
10:00:00	33	32	28	93	4	248	10:00:00	48	30	77	155	6
12:00:00	13	25	15	53	3	140	12:00:00	40	17	30	87	3
13:00:00	23	48	31	102	8	315	13:00:00	96	49	68	213	12
16:00:00	40	78	48	166	13	388	16:00:00	101	60	61	222	12
17:00:00	16	63	37	116	15	318	17:00:00	98	51	53	202	6
18:00:00	21	97	49	167	9	376	18:00:00	94	52	63	209	4
Totals:	221	422	248	891	61	2333		587	370	485	1442	47

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	667	714	577	355	868	832	1029	1055

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	140	140	2	2	0	0	6	6	0	0	0	0	0	0	0	0	1	1
7:30:00	7	5	287	147	7	5	0	0	11	5	0	0	0	0	0	0	0	0	1	0
7:45:00	8	1	438	151	12	5	0	0	16	5	0	0	0	0	0	0	0	0	1	0
8:00:00	16	8	601	163	20	8	0	0	21	5	0	0	0	0	0	0	0	0	4	3
8:15:00	21	5	763	162	31	11	0	0	24	3	0	0	0	0	0	0	0	0	4	0
8:30:00	27	6	925	162	53	22	0	0	27	3	0	0	0	0	0	0	0	0	4	0
8:45:00	35	8	1064	139	69	16	0	0	34	7	1	1	0	0	1	1	0	0	6	2
9:00:00	42	7	1199	135	84	15	0	0	37	3	1	0	0	0	1	0	0	0	6	0
9:15:00	53	11	1332	133	95	11	1	1	45	8	1	0	0	0	1	0	0	0	7	1
9:30:00	55	2	1456	124	103	8	1	0	50	5	1	0	0	0	2	1	0	0	7	0
9:45:00	65	10	1562	106	113	10	1	0	55	5	1	0	0	0	2	0	0	0	9	2
10:00:00	71	6	1671	109	123	10	1	0	58	3	1	0	0	0	2	0	0	0	10	1
10:02:04	71	0	1671	0	123	0	1	0	58	0	1	0	0	0	2	0	0	0	10	0
11:30:00	71	0	1671	0	123	0	1	0	58	0	1	0	0	0	2	0	0	0	10	0
11:45:00	76	5	1799	128	140	17	1	0	66	8	1	0	0	0	4	2	0	0	10	0
12:00:00	83	7	1958	159	158	18	1	0	72	6	1	0	0	0	4	0	0	0	13	3
12:15:00	91	8	2097	139	183	25	1	0	73	1	1	0	0	0	5	1	0	0	14	1
12:30:00	102	11	2266	169	201	18	1	0	76	3	2	1	0	0	5	0	0	0	14	0
12:45:00	109	7	2406	140	219	18	1	0	80	4	2	0	0	0	6	1	0	0	18	4
13:00:00	117	8	2555	149	236	17	1	0	84	4	2	0	0	0	6	0	0	0	28	10
13:15:00	122	5	2715	160	251	15	1	0	90	6	2	0	0	0	6	0	0	0	32	4
13:30:00	127	5	2867	152	266	15	1	0	100	10	2	0	0	0	6	0	0	0	42	10
13:31:50	127	0	2867	0	266	0	1	0	100	0	2	0	0	0	6	0	0	0	42	0
15:30:00	127	0	2867	0	266	0	1	0	100	0	2	0	0	0	6	0	0	0	42	0
15:45:00	134	7	2992	125	287	21	1	0	101	1	2	0	0	0	7	1	0	0	43	1
16:00:00	143	9	3110	118	310	23	1	0	107	6	2	0	0	0	7	0	0	0	44	1
16:15:00	148	5	3258	148	340	30	1	0	108	1	2	0	0	0	7	0	0	0	44	0
16:30:00	155	7	3403	145	364	24	1	0	111	3	2	0	0	0	7	0	0	0	44	0
16:45:00	161	6	3544	141	390	26	1	0	117	6	2	0	0	0	7	0	0	0	47	3
17:00:00	174	13	3692	148	412	22	1	0	121	4	3	1	0	0	8	1	0	0	47	0
17:15:00	183	9	3839	147	435	23	1	0	127	6	3	0	0	0	8	0	1	1	48	1
17:30:00	194	11	3980	141	455	20	1	0	128	1	3	0	0	0	8	0	1	0	48	0
17:45:00	200	6	4120	140	474	19	1	0	134	6	3	0	0	0	8	0	1	0	48	0
18:00:00	211	11	4262	142	498	24	1	0	137	3	3	0	0	0	8	0	1	0	48	0
18:15:00	218	7	4392	130	529	31	1	0	140	3	3	0	0	0	9	1	1	0	48	0
18:30:00	225	7	4544	152	546	17	1	0	145	5	3	0	0	0	9	0	1	0	50	2
18:45:00	225	0	4544	0	546	0	1	0	145	0	3	0	0	0	9	0	1	0	50	0
18:46:03	225	0	4544	0	546	0	1	0	145	0	3	0	0	0	9	0	1	0	50	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	9	9	8	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	13	4	13	5	5	4	0	0	0	0	0	0	0	0	0	0	0	0	2	1
7:45:00	22	9	19	6	9	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:00:00	34	12	21	2	14	5	0	0	0	0	0	0	0	0	0	0	0	0	5	3
8:15:00	43	9	31	10	19	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0
8:30:00	50	7	40	9	27	8	0	0	2	2	0	0	0	0	3	3	0	0	5	0
8:45:00	57	7	58	18	33	6	0	0	4	2	0	0	0	0	4	1	0	0	7	2
9:00:00	70	13	71	13	40	7	5	5	4	0	0	0	0	0	4	0	0	0	9	2
9:15:00	82	12	89	18	52	12	5	0	4	0	1	1	0	0	4	0	0	0	12	3
9:30:00	88	6	95	6	55	3	6	1	4	0	1	0	0	0	4	0	0	0	12	0
9:45:00	98	10	100	5	63	8	6	0	4	0	1	0	0	0	4	0	0	0	13	1
10:00:00	102	4	103	3	67	4	6	0	4	0	1	0	0	0	4	0	0	0	13	0
10:02:04	102	0	103	0	67	0	6	0	4	0	1	0	0	0	4	0	0	0	13	0
11:30:00	102	0	103	0	67	0	6	0	4	0	1	0	0	0	4	0	0	0	13	0
11:45:00	110	8	113	10	75	8	7	1	4	0	1	0	0	0	5	1	0	0	14	1
12:00:00	114	4	127	14	82	7	7	0	4	0	1	0	0	0	5	0	0	0	16	2
12:15:00	120	6	139	12	90	8	7	0	4	0	1	0	0	0	5	0	0	0	17	1
12:30:00	126	6	150	11	103	13	7	0	4	0	1	0	0	0	5	0	0	0	18	1
12:45:00	132	6	158	8	107	4	7	0	4	0	1	0	0	0	5	0	0	0	21	3
13:00:00	137	5	174	16	113	6	7	0	5	1	1	0	0	0	5	0	0	0	24	3
13:15:00	144	7	191	17	124	11	7	0	5	0	1	0	0	0	5	0	0	0	24	0
13:30:00	151	7	207	16	134	10	7	0	5	0	1	0	0	0	5	0	0	0	29	5
13:31:50	151	0	207	0	134	0	7	0	5	0	1	0	0	0	5	0	0	0	29	0
15:30:00	151	0	207	0	134	0	7	0	5	0	1	0	0	0	5	0	0	0	29	0
15:45:00	159	8	228	21	148	14	7	0	5	0	1	0	0	0	6	1	0	0	31	2
16:00:00	172	13	249	21	161	13	12	5	6	1	1	0	0	0	7	1	0	0	37	6
16:15:00	174	2	266	17	173	12	12	0	6	0	1	0	0	0	7	0	0	0	42	5
16:30:00	180	6	276	10	181	8	12	0	6	0	2	1	0	0	7	0	0	0	45	3
16:45:00	182	2	294	18	193	12	12	0	6	0	2	0	0	0	7	0	0	0	52	7
17:00:00	188	6	312	18	197	4	12	0	6	0	2	0	0	0	7	0	0	0	52	0
17:15:00	193	5	337	25	209	12	12	0	6	0	2	0	0	0	7	0	0	0	53	1
17:30:00	200	7	363	26	226	17	12	0	6	0	2	0	0	0	7	0	0	0	58	5
17:45:00	203	3	391	28	239	13	13	1	6	0	2	0	0	0	7	0	0	0	59	1
18:00:00	208	5	409	18	246	7	13	0	6	0	2	0	0	0	7	0	0	0	61	2
18:15:00	212	4	428	19	265	19	13	0	6	0	2	0	0	0	7	0	0	0	66	5
18:30:00	217	5	447	19	272	7	13	0	6	0	2	0	0	0	7	0	0	0	68	2
18:45:00	217	0	447	0	272	0	13	0	6	0	2	0	0	0	7	0	0	0	68	0
18:46:03	217	0	447	0	272	0	13	0	6	0	2	0	0	0	7	0	0	0	68	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300002**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	60	60	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
7:30:00	10	4	119	59	3	3	0	0	8	4	0	0	0	0	1	1	0	0	0	0
7:45:00	16	6	202	83	5	2	0	0	12	4	0	0	0	0	2	1	0	0	0	0
8:00:00	23	7	285	83	7	2	0	0	15	3	0	0	0	0	3	1	0	0	1	1
8:15:00	38	15	379	94	16	9	0	0	19	4	0	0	0	0	4	1	0	0	1	0
8:30:00	51	13	472	93	24	8	1	1	22	3	0	0	0	0	4	0	0	0	5	4
8:45:00	68	17	564	92	37	13	2	1	25	3	0	0	0	0	4	0	0	0	5	0
9:00:00	87	19	676	112	51	14	2	0	29	4	2	2	0	0	4	0	0	0	7	2
9:15:00	104	17	794	118	64	13	2	0	33	4	2	0	0	0	5	1	0	0	10	3
9:30:00	107	3	918	124	68	4	3	1	40	7	2	0	0	0	5	0	0	0	11	1
9:45:00	116	9	1028	110	72	4	4	1	46	6	2	0	0	0	5	0	0	0	11	0
10:00:00	127	11	1135	107	76	4	5	1	49	3	2	0	0	0	5	0	0	0	15	4
10:02:04	127	0	1135	0	76	0	5	0	49	0	2	0	0	0	5	0	0	0	15	0
11:30:00	127	0	1135	0	76	0	5	0	49	0	2	0	0	0	5	0	0	0	15	0
11:45:00	137	10	1282	147	81	5	5	0	53	4	2	0	0	0	5	0	0	0	15	0
12:00:00	150	13	1442	160	83	2	5	0	56	3	2	0	0	0	5	0	0	0	17	2
12:15:00	181	31	1633	191	103	20	5	0	59	3	2	0	0	0	5	0	0	0	20	3
12:30:00	207	26	1799	166	105	2	5	0	65	6	2	0	0	0	6	1	0	0	24	4
12:45:00	232	25	1964	165	115	10	5	0	71	6	2	0	0	0	6	0	0	0	26	2
13:00:00	260	28	2123	159	122	7	5	0	78	7	2	0	0	0	6	0	0	0	31	5
13:15:00	280	20	2278	155	127	5	5	0	84	6	2	0	0	0	6	0	0	0	34	3
13:30:00	298	18	2441	163	134	7	5	0	88	4	2	0	0	0	7	1	0	0	40	6
13:31:50	298	0	2441	0	134	0	5	0	88	0	2	0	0	0	7	0	0	0	40	0
15:30:00	298	0	2441	0	134	0	5	0	88	0	2	0	0	0	7	0	0	0	40	0
15:45:00	319	21	2614	173	147	13	5	0	92	4	3	1	0	0	7	0	0	0	50	10
16:00:00	336	17	2807	193	154	7	6	1	96	4	3	0	0	0	8	1	0	0	56	6
16:15:00	357	21	3024	217	159	5	6	0	100	4	3	0	0	0	10	2	0	0	60	4
16:30:00	375	18	3218	194	167	8	6	0	103	3	3	0	0	0	10	0	0	0	65	5
16:45:00	405	30	3437	219	172	5	7	1	108	5	3	0	0	0	10	0	0	0	65	0
17:00:00	438	33	3664	227	183	11	7	0	110	2	3	0	0	0	11	1	0	0	69	4
17:15:00	464	26	3909	245	194	11	7	0	115	5	4	1	0	0	11	0	0	0	73	4
17:30:00	499	35	4139	230	200	6	7	0	120	5	4	0	0	0	11	0	0	0	75	2
17:45:00	516	17	4337	198	209	9	7	0	125	5	4	0	0	0	11	0	0	0	78	3
18:00:00	547	31	4541	204	214	5	7	0	129	4	4	0	0	0	11	0	0	0	78	0
18:15:00	582	35	4741	200	217	3	7	0	134	5	4	0	0	0	11	0	0	0	78	0
18:30:00	611	29	4903	162	224	7	7	0	138	4	4	0	0	0	11	0	0	0	80	2
18:45:00	611	0	4903	0	224	0	7	0	138	0	4	0	0	0	11	0	0	0	80	0
18:46:03	611	0	4903	0	224	0	7	0	138	0	4	0	0	0	11	0	0	0	80	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300002**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	8	8	15	15	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30:00	14	8	15	7	34	19	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45:00	24	10	22	7	48	14	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00:00	43	19	37	15	65	17	1	1	0	0	0	0	0	0	0	0	0	0	1	0
8:15:00	52	9	52	15	73	8	1	0	0	0	0	0	0	0	0	0	0	0	2	1
8:30:00	67	15	65	13	93	20	1	0	0	0	1	1	0	0	0	0	0	0	2	0
8:45:00	88	21	81	16	111	18	1	0	0	0	1	0	0	0	0	0	0	0	2	0
9:00:00	107	19	108	27	132	21	3	2	3	3	1	0	0	0	0	0	0	0	4	2
9:15:00	120	13	120	12	162	30	3	0	3	0	1	0	0	0	0	0	0	0	6	2
9:30:00	128	8	125	5	179	17	3	0	3	0	1	0	0	0	0	0	0	0	10	4
9:45:00	140	12	132	7	193	14	3	0	3	0	1	0	0	0	0	0	0	0	10	0
10:00:00	155	15	138	6	208	15	3	0	3	0	2	1	0	0	0	0	0	0	10	0
10:02:04	155	0	138	0	208	0	3	0	3	0	2	0	0	0	0	0	0	0	10	0
11:30:00	155	0	138	0	208	0	3	0	3	0	2	0	0	0	0	0	0	0	10	0
11:45:00	171	16	147	9	225	17	3	0	3	0	2	0	0	0	0	0	0	0	13	3
12:00:00	195	24	155	8	238	13	3	0	3	0	2	0	0	0	0	0	0	0	13	0
12:15:00	210	15	169	14	257	19	3	0	3	0	2	0	0	0	0	0	0	0	17	4
12:30:00	236	26	180	11	273	16	3	0	3	0	3	1	0	0	0	0	0	0	17	0
12:45:00	265	29	192	12	286	13	3	0	3	0	3	0	0	0	0	0	0	0	20	3
13:00:00	291	26	204	12	305	19	3	0	3	0	3	0	0	0	0	0	0	0	25	5
13:15:00	314	23	216	12	319	14	3	0	3	0	3	0	0	0	0	0	0	0	26	1
13:30:00	335	21	227	11	334	15	3	0	3	0	3	0	0	0	0	0	0	0	35	9
13:31:50	335	0	227	0	334	0	3	0	3	0	3	0	0	0	0	0	0	0	35	0
15:30:00	335	0	227	0	334	0	3	0	3	0	3	0	0	0	0	0	0	0	35	0
15:45:00	365	30	247	20	347	13	3	0	5	2	7	4	0	0	0	0	0	0	36	1
16:00:00	392	27	262	15	361	14	3	0	5	0	7	0	0	0	0	0	1	1	37	1
16:15:00	414	22	273	11	382	21	3	0	5	0	7	0	0	0	1	1	1	0	38	1
16:30:00	437	23	287	14	390	8	4	1	5	0	7	0	0	0	2	1	1	0	41	3
16:45:00	465	28	295	8	401	11	4	0	5	0	7	0	0	0	2	0	1	0	43	2
17:00:00	489	24	311	16	412	11	4	0	5	0	9	2	0	0	2	0	1	0	43	0
17:15:00	514	25	324	13	427	15	4	0	5	0	9	0	0	0	2	0	1	0	44	1
17:30:00	540	26	337	13	442	15	4	0	5	0	9	0	0	0	2	0	1	0	44	0
17:45:00	562	22	350	13	457	15	4	0	5	0	9	0	0	0	2	0	1	0	45	1
18:00:00	583	21	363	13	475	18	4	0	5	0	9	0	0	0	2	0	1	0	47	2
18:15:00	606	23	373	10	489	14	4	0	5	0	9	0	0	0	2	0	1	0	51	4
18:30:00	630	24	391	18	507	18	4	0	5	0	9	0	0	0	2	0	1	0	53	2
18:45:00	630	0	391	0	507	0	4	0	5	0	9	0	0	0	2	0	1	0	53	0
18:46:03	630	0	391	0	507	0	4	0	5	0	9	0	0	0	2	0	1	0	53	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Aurora
Site #: 1825300003
Intersection: Yonge St & Wellington St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1279
North Entering: 738
North Peds: 30
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	4	20	2	26
Cars	129	489	94	712
Totals	133	509	96	

Cyclists	1
Trucks	21
Cars	519
Totals	541

East Leg Total: 1191
East Entering: 509
East Peds: 25
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
1	27	495	523

Wellington St

Cars	Trucks	Cyclists	Totals
91	5	0	96
332	20	1	353
54	6	0	60
477	31	1	

N
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S

Cyclists	Trucks	Cars	Totals
0	5	98	103
0	22	499	521
0	4	108	112
0	31	705	

Wellington St

Cars	Trucks	Cyclists	Totals
653	29	0	682

Yonge St

Peds Cross: ⧗
West Peds: 22
West Entering: 736
West Leg Total: 1259

Cars	651
Trucks	30
Cyclists	0
Totals	681

Cars	34	330	60	424
Trucks	3	11	5	19
Cyclists	0	1	0	1
Totals	37	342	65	

Peds Cross: ⋈
South Peds: 11
South Entering: 444
South Leg Total: 1125

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:30:00
To: 13:30:00

Municipality:	Aurora
Site #:	1825300003
Intersection:	Yonge St & Wellington St
TFR File #:	1
Count date:	27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total:	1497
North Entering:	726
North Peds:	70
Peds Cross:	⋈

Cyclists	0	0	2	2
Trucks	6	17	3	26
Cars	131	449	118	698
Totals	137	466	123	
	↲	↓	↳	

↑	
Cyclists	1
Trucks	22
Cars	748
Totals	771

East Leg Total:	1186
East Entering:	624
East Peds:	39
Peds Cross:	⧗

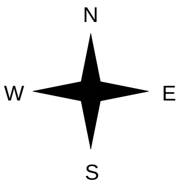
Yonge St

Cyclists	Trucks	Cars	Totals
0	20	527	547

←

Wellington St

	Cars	Trucks	Cyclists	Totals
↰	159	8	0	167
←	352	14	0	366
↲	89	2	0	91
	600	24	0	



Cyclists	Trucks	Cars	Totals	
0	3	117	120	↱
0	12	357	369	→
1	0	85	86	↳
1	15	559		

Wellington St

→

Cars	Trucks	Cyclists	Totals
542	18	2	562

Yonge St

Peds Cross:	⧗
West Peds:	51
West Entering:	575
West Leg Total:	1122

Cars	623
Trucks	19
Cyclists	1
Totals	643

↓

	↰	↑	↱	
Cars	44	472	67	583
Trucks	0	11	3	14
Cyclists	0	1	0	1
Totals	44	484	70	

Peds Cross:	⋈
South Peds:	24
South Entering:	598
South Leg Total:	1241

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

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

Municipality: Aurora
Site #: 1825300003
Intersection: Yonge St & Wellington St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total:	1630
North Entering:	553
North Peds:	63
Peds Cross:	⋈

Cyclists	0	0	0	0
Trucks	3	16	2	21
Cars	67	421	44	532
Totals	70	437	46	

Cyclists	2
Trucks	17
Cars	1058
Totals	1077

East Leg Total:	1301
East Entering:	757
East Peds:	40
Peds Cross:	⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	11	616	627

Wellington St

Cars	Trucks	Cyclists	Totals
189	0	0	189
472	6	0	478
88	2	0	90
749	8	0	

N
W E
S

Cyclists	Trucks	Cars	Totals
0	2	130	132
2	8	429	439
0	0	99	99
2	10	658	

Wellington St

Cars	Trucks	Cyclists	Totals
528	14	2	544

Yonge St

Peds Cross:	⧗
West Peds:	33
West Entering:	670
West Leg Total:	1297

Cars	608
Trucks	18
Cyclists	0
Totals	626

Cars	77	739	55	871
Trucks	2	15	4	21
Cyclists	0	2	0	2
Totals	79	756	59	

Peds Cross:	⋈
South Peds:	21
South Entering:	894
South Leg Total:	1520

Comments

Ontario Traffic Inc.

Total Count Diagram

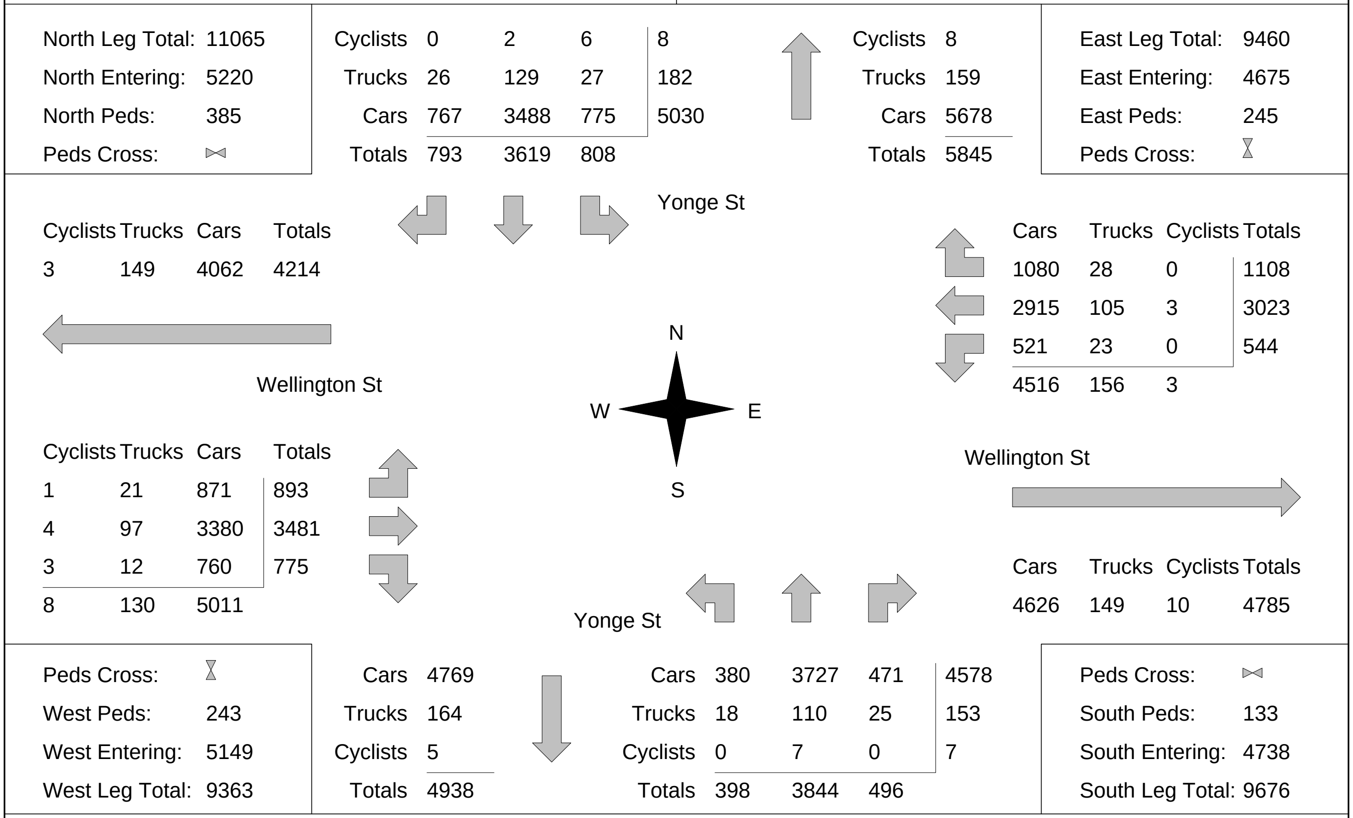
Municipality: Aurora
Site #: 1825300003
Intersection: Yonge St & Wellington St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total:	11065
North Entering:	5220
North Peds:	385
Peds Cross:	⋈

Cyclists	0	2	6	8
Trucks	26	129	27	182
Cars	767	3488	775	5030
Totals	793	3619	808	

Cyclists	8
Trucks	159
Cars	5678
Totals	5845

East Leg Total:	9460
East Entering:	4675
East Peds:	245
Peds Cross:	⧗

Cyclists	Trucks	Cars	Totals
3	149	4062	4214

Cars	Trucks	Cyclists	Totals
1080	28	0	1108
2915	105	3	3023
521	23	0	544
4516	156	3	

Cyclists	Trucks	Cars	Totals
1	21	871	893
4	97	3380	3481
3	12	760	775
8	130	5011	

Cars	Trucks	Cyclists	Totals
4626	149	10	4785

Peds Cross:	⧗
West Peds:	243
West Entering:	5149
West Leg Total:	9363

Cars	4769
Trucks	164
Cyclists	5
Totals	4938

Cars	380	3727	471	4578
Trucks	18	110	25	153
Cyclists	0	7	0	7
Totals	398	3844	496	

Peds Cross:	⋈
South Peds:	133
South Entering:	4738
South Leg Total:	9676

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Wellington St	Count Date: 27-Jun-18	Municipality: Aurora

North Approach Totals						North/South Total Approaches	South Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	152	461	91	704	20	1018	8:00:00	28	245	41	314	13
9:00:00	88	510	127	725	31	1154	9:00:00	35	329	65	429	7
10:00:00	115	437	91	643	25	1115	10:00:00	37	367	68	472	16
12:00:00	60	224	67	351	17	622	12:00:00	28	222	21	271	10
13:00:00	127	449	126	702	63	1286	13:00:00	43	492	49	584	19
16:00:00	103	439	111	653	80	1271	16:00:00	47	505	66	618	27
17:00:00	71	450	79	600	75	1429	17:00:00	69	677	83	829	22
18:00:00	55	436	69	560	59	1416	18:00:00	75	722	59	856	15
Totals:	771	3406	761	4938	370	9311		362	3559	452	4373	129

East Approach Totals						East/West Total Approaches	West Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	25	316	44	385	15	1002	8:00:00	60	488	69	617	17
9:00:00	49	376	92	517	25	1253	9:00:00	83	550	103	736	15
10:00:00	66	284	106	456	26	1054	10:00:00	95	401	102	598	32
12:00:00	45	182	75	302	12	580	12:00:00	48	164	66	278	21
13:00:00	83	315	191	589	32	1224	13:00:00	138	393	104	635	41
16:00:00	76	414	145	635	37	1260	16:00:00	142	394	89	625	51
17:00:00	84	455	174	713	49	1384	17:00:00	126	438	107	671	31
18:00:00	82	488	188	758	38	1420	18:00:00	133	441	88	662	26
Totals:	510	2830	1015	4355	234	9177		825	3269	728	4822	234

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	606	720	603	302	696	739	762	777

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300003**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	39	39	94	94	16	16	1	1	5	5	0	0	0	0	0	0	0	0	4	4
7:30:00	81	42	198	104	35	19	3	2	7	2	1	1	0	0	0	0	0	0	13	9
7:45:00	118	37	335	137	65	30	4	1	11	4	1	0	0	0	0	0	0	0	16	3
8:00:00	147	29	447	112	89	24	5	1	14	3	2	1	0	0	0	0	0	0	20	4
8:15:00	169	22	576	129	123	34	5	0	19	5	2	0	0	0	0	0	0	0	27	7
8:30:00	189	20	699	123	158	35	5	0	23	4	2	0	0	0	0	0	0	0	36	9
8:45:00	211	22	830	131	183	25	5	0	29	6	3	1	0	0	0	0	0	0	44	8
9:00:00	234	23	940	110	213	30	6	1	31	2	5	2	0	0	0	0	0	0	51	7
9:15:00	263	29	1065	125	252	39	7	1	39	8	6	1	0	0	0	0	0	0	57	6
9:30:00	292	29	1165	100	270	18	8	1	43	4	7	1	0	0	0	0	0	0	68	11
9:45:00	323	31	1269	104	284	14	9	1	47	4	7	0	0	0	1	1	0	0	71	3
10:00:00	345	22	1356	87	300	16	10	1	51	4	9	2	0	0	1	0	0	0	76	5
10:00:43	345	0	1356	0	300	0	10	0	51	0	9	0	0	0	1	0	0	0	76	0
11:30:00	345	0	1356	0	300	0	10	0	51	0	9	0	0	0	1	0	0	0	76	0
11:45:00	376	31	1448	92	329	29	13	3	56	5	11	2	0	0	1	0	0	0	85	9
12:00:00	399	23	1570	122	364	35	16	3	61	5	12	1	0	0	1	0	0	0	93	8
12:15:00	428	29	1671	101	393	29	16	0	66	5	12	0	0	0	1	0	0	0	106	13
12:30:00	456	28	1783	112	424	31	19	3	68	2	12	0	0	0	1	0	0	0	127	21
12:45:00	494	38	1881	98	457	33	19	0	72	4	13	1	0	0	1	0	0	0	137	10
13:00:00	523	29	2006	125	487	30	19	0	74	2	15	2	0	0	1	0	0	0	156	19
13:15:00	548	25	2124	118	527	40	20	1	80	6	15	0	1	1	1	0	0	0	177	21
13:30:00	574	26	2232	108	555	28	22	2	85	5	18	3	2	1	1	0	0	0	197	20
13:30:44	574	0	2232	0	555	0	22	0	85	0	18	0	2	0	1	0	0	0	197	0
15:30:00	574	0	2232	0	555	0	22	0	85	0	18	0	2	0	1	0	0	0	197	0
15:45:00	593	19	2333	101	572	17	24	2	88	3	18	0	3	1	1	0	0	0	223	26
16:00:00	615	22	2425	92	592	20	24	0	94	6	21	3	6	3	1	0	0	0	236	13
16:15:00	636	21	2530	105	615	23	24	0	96	2	21	0	6	0	1	0	0	0	253	17
16:30:00	662	26	2643	113	636	21	24	0	96	0	22	1	6	0	2	1	0	0	261	8
16:45:00	675	13	2754	111	650	14	24	0	102	6	22	0	6	0	2	0	0	0	293	32
17:00:00	685	10	2864	110	668	18	25	1	104	2	24	2	6	0	2	0	0	0	311	18
17:15:00	696	11	2965	101	689	21	26	1	110	6	24	0	6	0	2	0	0	0	329	18
17:30:00	708	12	3070	105	700	11	26	0	113	3	24	0	6	0	2	0	0	0	342	13
17:45:00	719	11	3175	105	717	17	26	0	118	5	25	1	6	0	2	0	0	0	356	14
18:00:00	738	19	3282	107	736	19	27	1	122	4	25	0	6	0	2	0	0	0	370	14
18:15:00	750	12	3407	125	749	13	27	0	124	2	25	0	6	0	2	0	0	0	375	5
18:30:00	775	25	3488	81	767	18	27	0	129	5	26	1	6	0	2	0	0	0	385	10
18:45:00	775	0	3488	0	767	0	27	0	129	0	26	0	6	0	2	0	0	0	385	0
18:45:48	775	0	3488	0	767	0	27	0	129	0	26	0	6	0	2	0	0	0	385	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300003

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	5	5	67	67	5	5	0	0	4	4	0	0	0	0	0	0	0	0	2	2
7:30:00	11	6	136	69	16	11	0	0	9	5	1	1	0	0	0	0	0	0	8	6
7:45:00	17	6	213	77	28	12	1	1	12	3	2	1	0	0	0	0	0	0	10	2
8:00:00	23	6	299	86	42	14	2	1	17	5	2	0	0	0	0	0	0	0	15	5
8:15:00	27	4	397	98	62	20	3	1	21	4	3	1	0	0	0	0	0	0	20	5
8:30:00	36	9	495	98	82	20	4	1	25	4	4	1	0	0	0	0	0	0	23	3
8:45:00	50	14	582	87	99	17	6	2	29	4	6	2	0	0	0	0	0	0	35	12
9:00:00	66	16	659	77	128	29	8	2	33	4	8	2	0	0	0	0	0	0	40	5
9:15:00	81	15	729	70	153	25	9	1	41	8	8	0	0	0	1	1	0	0	45	5
9:30:00	95	14	807	78	169	16	11	2	46	5	9	1	0	0	1	0	0	0	56	11
9:45:00	109	14	866	59	199	30	11	0	50	4	11	2	0	0	3	2	0	0	61	5
10:00:00	128	19	919	53	228	29	12	1	54	4	14	3	0	0	3	0	0	0	66	5
10:00:43	128	0	919	0	228	0	12	0	54	0	14	0	0	0	3	0	0	0	66	0
11:30:00	128	0	919	0	228	0	12	0	54	0	14	0	0	0	3	0	0	0	66	0
11:45:00	150	22	998	79	265	37	12	0	56	2	15	1	0	0	3	0	0	0	71	5
12:00:00	173	23	1096	98	302	37	12	0	59	3	15	0	0	0	3	0	0	0	78	7
12:15:00	192	19	1170	74	353	51	14	2	63	4	15	0	0	0	3	0	0	0	85	7
12:30:00	210	18	1241	71	394	41	16	2	66	3	16	1	0	0	3	0	0	0	91	6
12:45:00	232	22	1301	60	436	42	16	0	72	6	18	2	0	0	3	0	0	0	102	11
13:00:00	250	18	1395	94	489	53	18	2	75	3	19	1	0	0	3	0	0	0	110	8
13:15:00	271	21	1478	83	520	31	18	0	78	3	22	3	0	0	3	0	0	0	120	10
13:30:00	299	28	1593	115	553	33	18	0	80	2	24	2	0	0	3	0	0	0	130	10
13:30:44	299	0	1593	0	553	0	18	0	80	0	24	0	0	0	3	0	0	0	130	0
15:30:00	299	0	1593	0	553	0	18	0	80	0	24	0	0	0	3	0	0	0	130	0
15:45:00	307	8	1698	105	590	37	19	1	85	5	26	2	0	0	3	0	0	0	136	6
16:00:00	323	16	1797	99	627	37	21	2	87	2	26	0	0	0	3	0	0	0	147	11
16:15:00	347	24	1919	122	681	54	21	0	90	3	26	0	0	0	3	0	0	0	161	14
16:30:00	364	17	2022	103	720	39	21	0	93	3	27	1	0	0	3	0	0	0	168	7
16:45:00	381	17	2126	104	752	32	21	0	93	0	27	0	0	0	3	0	0	0	188	20
17:00:00	406	25	2243	117	800	48	22	1	96	3	27	0	0	0	3	0	0	0	196	8
17:15:00	426	20	2353	110	844	44	22	0	97	1	27	0	0	0	3	0	0	0	211	15
17:30:00	453	27	2486	133	893	49	22	0	99	2	27	0	0	0	3	0	0	0	217	6
17:45:00	469	16	2598	112	941	48	23	1	99	0	27	0	0	0	3	0	0	0	228	11
18:00:00	487	18	2725	127	988	47	23	0	102	3	27	0	0	0	3	0	0	0	234	6
18:15:00	501	14	2811	86	1031	43	23	0	102	0	28	1	0	0	3	0	0	0	239	5
18:30:00	521	20	2915	104	1080	49	23	0	105	3	28	0	0	0	3	0	0	0	245	6
18:45:00	521	0	2915	0	1080	0	23	0	105	0	28	0	0	0	3	0	0	0	245	0
18:45:48	521	0	2915	0	1080	0	23	0	105	0	28	0	0	0	3	0	0	0	245	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300003**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	50	50	7	7	1	1	4	4	1	1	0	0	0	0	0	0	3	3
7:30:00	7	3	100	50	17	10	1	0	8	4	1	0	0	0	0	0	0	0	7	4
7:45:00	14	7	163	63	31	14	2	1	10	2	3	2	0	0	0	0	0	0	8	1
8:00:00	25	11	232	69	38	7	3	1	13	3	3	0	0	0	0	0	0	0	13	5
8:15:00	31	6	313	81	53	15	5	2	18	5	4	1	0	0	1	1	0	0	15	2
8:30:00	37	6	381	68	68	15	6	1	20	2	5	1	0	0	1	0	0	0	15	0
8:45:00	46	9	462	81	83	15	6	0	22	2	7	2	0	0	1	0	0	0	18	3
9:00:00	56	10	547	85	99	16	7	1	26	4	7	0	0	0	1	0	0	0	20	2
9:15:00	65	9	643	96	113	14	8	1	29	3	9	2	0	0	2	1	0	0	26	6
9:30:00	71	6	740	97	128	15	9	1	35	6	10	1	0	0	2	0	0	0	29	3
9:45:00	80	9	817	77	149	21	10	1	42	7	10	0	0	0	2	0	0	0	32	3
10:00:00	90	10	894	77	162	13	10	0	45	3	12	2	0	0	2	0	0	0	36	4
10:00:43	90	0	894	0	162	0	10	0	45	0	12	0	0	0	2	0	0	0	36	0
11:30:00	90	0	894	0	162	0	10	0	45	0	12	0	0	0	2	0	0	0	36	0
11:45:00	102	12	1002	108	174	12	11	1	49	4	12	0	0	0	2	0	0	0	38	2
12:00:00	116	14	1108	106	182	8	12	1	53	4	13	1	0	0	2	0	0	0	46	8
12:15:00	125	9	1238	130	192	10	12	0	56	3	14	1	0	0	2	0	0	0	51	5
12:30:00	136	11	1360	122	200	8	12	0	57	1	15	1	0	0	2	0	0	0	54	3
12:45:00	149	13	1478	118	212	12	12	0	59	2	16	1	0	0	2	0	0	0	58	4
13:00:00	159	10	1590	112	227	15	12	0	63	4	17	1	0	0	2	0	0	0	65	7
13:15:00	168	9	1707	117	248	21	12	0	66	3	18	1	0	0	2	0	0	0	73	8
13:30:00	180	12	1832	125	267	19	12	0	68	2	18	0	0	0	3	1	0	0	78	5
13:30:44	180	0	1832	0	267	0	12	0	68	0	18	0	0	0	3	0	0	0	78	0
15:30:00	180	0	1832	0	267	0	12	0	68	0	18	0	0	0	3	0	0	0	78	0
15:45:00	192	12	1953	121	279	12	14	2	72	4	18	0	0	0	3	0	0	0	88	10
16:00:00	204	12	2082	129	292	13	14	0	75	3	18	0	0	0	3	0	0	0	92	4
16:15:00	220	16	2236	154	315	23	14	0	79	4	19	1	0	0	4	1	0	0	99	7
16:30:00	234	14	2380	144	336	21	15	1	80	1	19	0	0	0	4	0	0	0	103	4
16:45:00	253	19	2556	176	357	21	15	0	84	4	20	1	0	0	5	1	0	0	106	3
17:00:00	271	18	2746	190	373	16	16	1	86	2	20	0	0	0	5	0	0	0	114	8
17:15:00	288	17	2947	201	386	13	16	0	90	4	22	2	0	0	5	0	0	0	119	5
17:30:00	304	16	3122	175	393	7	16	0	94	4	22	0	0	0	7	2	0	0	124	5
17:45:00	330	26	3295	173	412	19	17	1	99	5	24	2	0	0	7	0	0	0	127	3
18:00:00	345	15	3449	154	428	16	17	0	103	4	24	0	0	0	7	0	0	0	129	2
18:15:00	367	22	3605	156	444	16	18	1	106	3	25	1	0	0	7	0	0	0	132	3
18:30:00	380	13	3727	122	471	27	18	0	110	4	25	0	0	0	7	0	0	0	133	1
18:45:00	380	0	3727	0	471	0	18	0	110	0	25	0	0	0	7	0	0	0	133	0
18:45:48	380	0	3727	0	471	0	18	0	110	0	25	0	0	0	7	0	0	0	133	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300003**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	9	9	99	99	13	13	0	0	2	2	0	0	0	0	0	0	0	0	5	5
7:30:00	24	15	239	140	28	15	0	0	4	2	0	0	0	0	1	1	0	0	9	4
7:45:00	38	14	335	96	48	20	1	1	4	0	0	0	0	0	1	0	0	0	12	3
8:00:00	58	20	479	144	68	20	2	1	8	4	1	1	0	0	1	0	0	0	17	5
8:15:00	70	12	610	131	95	27	2	0	10	2	1	0	0	0	1	0	0	0	21	4
8:30:00	86	16	754	144	115	20	4	2	15	5	3	2	0	0	1	0	0	0	23	2
8:45:00	108	22	870	116	136	21	4	0	16	1	3	0	0	0	1	0	0	0	24	1
9:00:00	137	29	1008	138	167	31	6	2	29	13	5	2	0	0	1	0	0	0	32	8
9:15:00	168	31	1109	101	203	36	7	1	32	3	5	0	0	0	1	0	0	0	43	11
9:30:00	187	19	1218	109	222	19	8	1	36	4	7	2	0	0	1	0	0	0	48	5
9:45:00	208	21	1295	77	249	27	9	1	39	3	8	1	0	0	1	0	0	0	54	6
10:00:00	229	21	1390	95	266	17	9	0	48	9	8	0	0	0	1	0	0	0	64	10
10:00:43	229	0	1390	0	266	0	9	0	48	0	8	0	0	0	1	0	0	0	64	0
11:30:00	229	0	1390	0	266	0	9	0	48	0	8	0	0	0	1	0	0	0	64	0
11:45:00	250	21	1462	72	297	31	10	1	52	4	8	0	0	0	2	1	0	0	72	8
12:00:00	275	25	1548	86	332	35	11	1	53	1	8	0	0	0	2	0	0	0	85	13
12:15:00	315	40	1665	117	355	23	11	0	55	2	9	1	0	0	2	0	0	0	94	9
12:30:00	351	36	1760	95	384	29	14	3	58	3	9	0	0	0	2	0	0	0	106	12
12:45:00	381	30	1842	82	410	26	14	0	61	3	9	0	0	0	2	0	0	0	116	10
13:00:00	407	26	1928	86	434	24	17	3	66	5	9	0	0	0	2	0	1	1	126	10
13:15:00	436	29	2024	96	449	15	17	0	69	3	9	0	0	0	2	0	1	0	135	9
13:30:00	468	32	2117	93	469	20	17	0	70	1	9	0	0	0	2	0	1	0	157	22
13:30:44	468	0	2117	0	469	0	17	0	70	0	9	0	0	0	2	0	1	0	157	0
15:30:00	468	0	2117	0	469	0	17	0	70	0	9	0	0	0	2	0	1	0	157	0
15:45:00	504	36	2216	99	493	24	17	0	75	5	10	1	0	0	2	0	3	2	173	16
16:00:00	548	44	2311	95	519	26	17	0	77	2	11	1	1	1	2	0	3	0	177	4
16:15:00	577	29	2426	115	548	29	17	0	80	3	11	0	1	0	2	0	3	0	185	8
16:30:00	607	30	2532	106	571	23	18	1	82	2	12	1	1	0	2	0	3	0	188	3
16:45:00	639	32	2629	97	594	23	18	0	85	3	12	0	1	0	2	0	3	0	196	8
17:00:00	673	34	2739	110	625	31	18	0	87	2	12	0	1	0	2	0	3	0	208	12
17:15:00	709	36	2853	114	646	21	19	1	90	3	12	0	1	0	2	0	3	0	216	8
17:30:00	745	36	2953	100	665	19	20	1	91	1	12	0	1	0	4	2	3	0	220	4
17:45:00	769	24	3058	105	693	28	20	0	93	2	12	0	1	0	4	0	3	0	229	9
18:00:00	804	35	3171	113	713	20	20	0	94	1	12	0	1	0	4	0	3	0	234	5
18:15:00	834	30	3262	91	734	21	21	1	96	2	12	0	1	0	4	0	3	0	240	6
18:30:00	871	37	3380	118	760	26	21	0	97	1	12	0	1	0	4	0	3	0	243	3
18:45:00	871	0	3380	0	760	0	21	0	97	0	12	0	1	0	4	0	3	0	243	0
18:45:48	871	0	3380	0	760	0	21	0	97	0	12	0	1	0	4	0	3	0	243	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:15:00
To: 9:15:00

Municipality: Aurora
Site #: 1825300005
Intersection: Yonge St & Kennedy St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total:	1212
North Entering:	697
North Peds:	2
Peds Cross:	⋈

Cyclists	0	0	0	0
Trucks	2	26	0	28
Cars	3	646	20	669
Totals	5	672	20	

Cyclists	1
Trucks	14
Cars	500
Totals	515

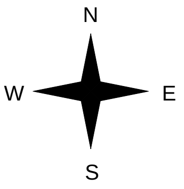
East Leg Total:	115
East Entering:	62
East Peds:	6
Peds Cross:	⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	2	20	22

Cars	Trucks	Cyclists	Totals
13	0	0	13
3	0	0	3
46	0	0	46
62	0	0	

Kennedy St



Cyclists	Trucks	Cars	Totals
0	0	6	6
0	0	8	8
0	0	34	34
0	0	48	

Kennedy St

Cars	Trucks	Cyclists	Totals
53	0	0	53

Yonge St

Peds Cross:	⧗
West Peds:	10
West Entering:	48
West Leg Total:	70

Cars	726
Trucks	26
Cyclists	0
Totals	752

Cars	14	481	25	520
Trucks	0	14	0	14
Cyclists	0	1	0	1
Totals	14	496	25	

Peds Cross:	⋈
South Peds:	5
South Entering:	535
South Leg Total:	1287

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 11:30:00
To: 12:30:00

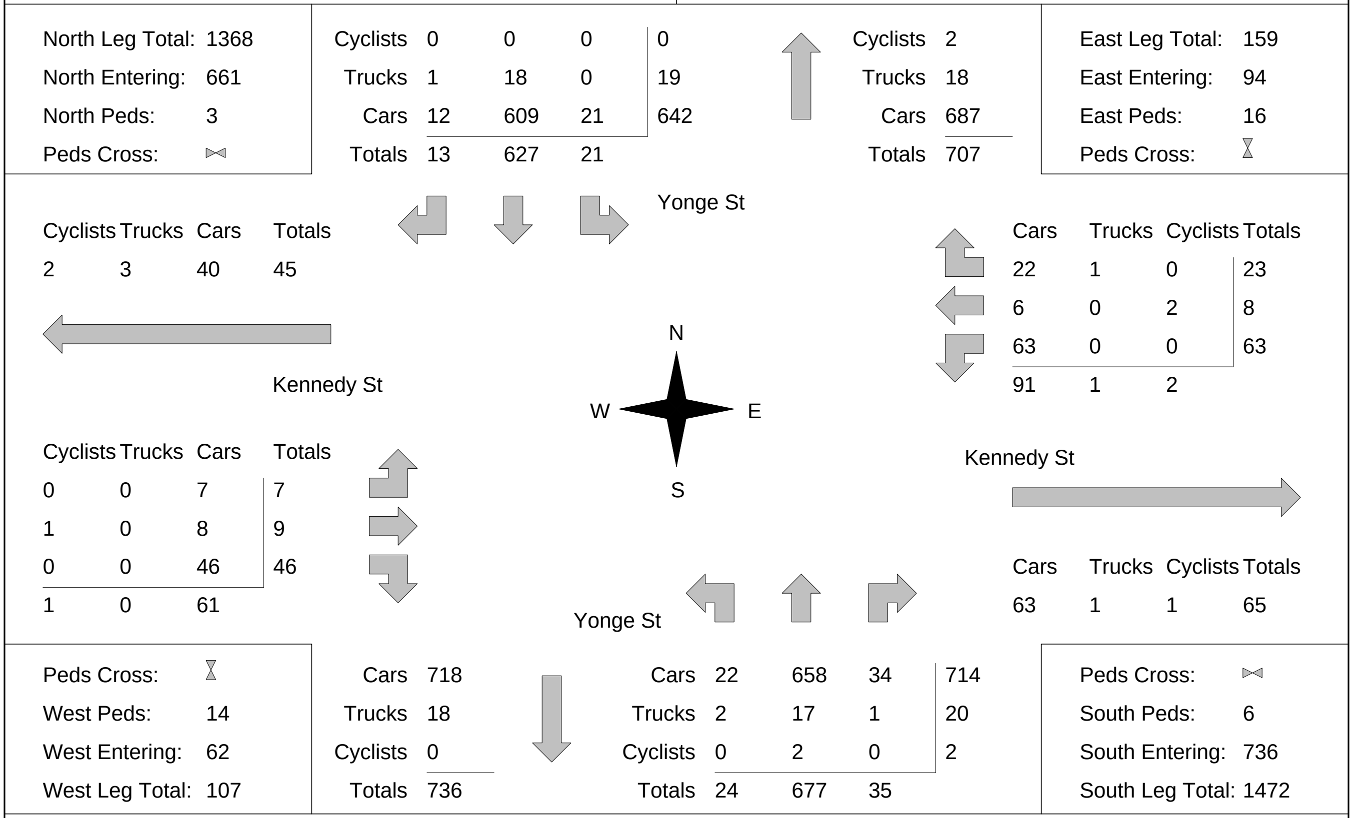
Municipality: Aurora
Site #: 1825300005
Intersection: Yonge St & Kennedy St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 1368
North Entering: 661
North Peds: 3
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	1	18	0	19
Cars	12	609	21	642
Totals	13	627	21	

Cyclists	2
Trucks	18
Cars	687
Totals	707

East Leg Total: 159
East Entering: 94
East Peds: 16
Peds Cross: ⧖

Cyclists	Trucks	Cars	Totals
2	3	40	45

Cars	Trucks	Cyclists	Totals
22	1	0	23
6	0	2	8
63	0	0	63
91	1	2	

Cyclists	Trucks	Cars	Totals
0	0	7	7
1	0	8	9
0	0	46	46
1	0	61	

Cars	Trucks	Cyclists	Totals
63	1	1	65

Peds Cross: ⧖
West Peds: 14
West Entering: 62
West Leg Total: 107

Cars	718
Trucks	18
Cyclists	0
Totals	736

Cars	22	658	34	714
Trucks	2	17	1	20
Cyclists	0	2	0	2
Totals	24	677	35	

Peds Cross: ⋈
South Peds: 6
South Entering: 736
South Leg Total: 1472

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:30:00
To: 17:30:00

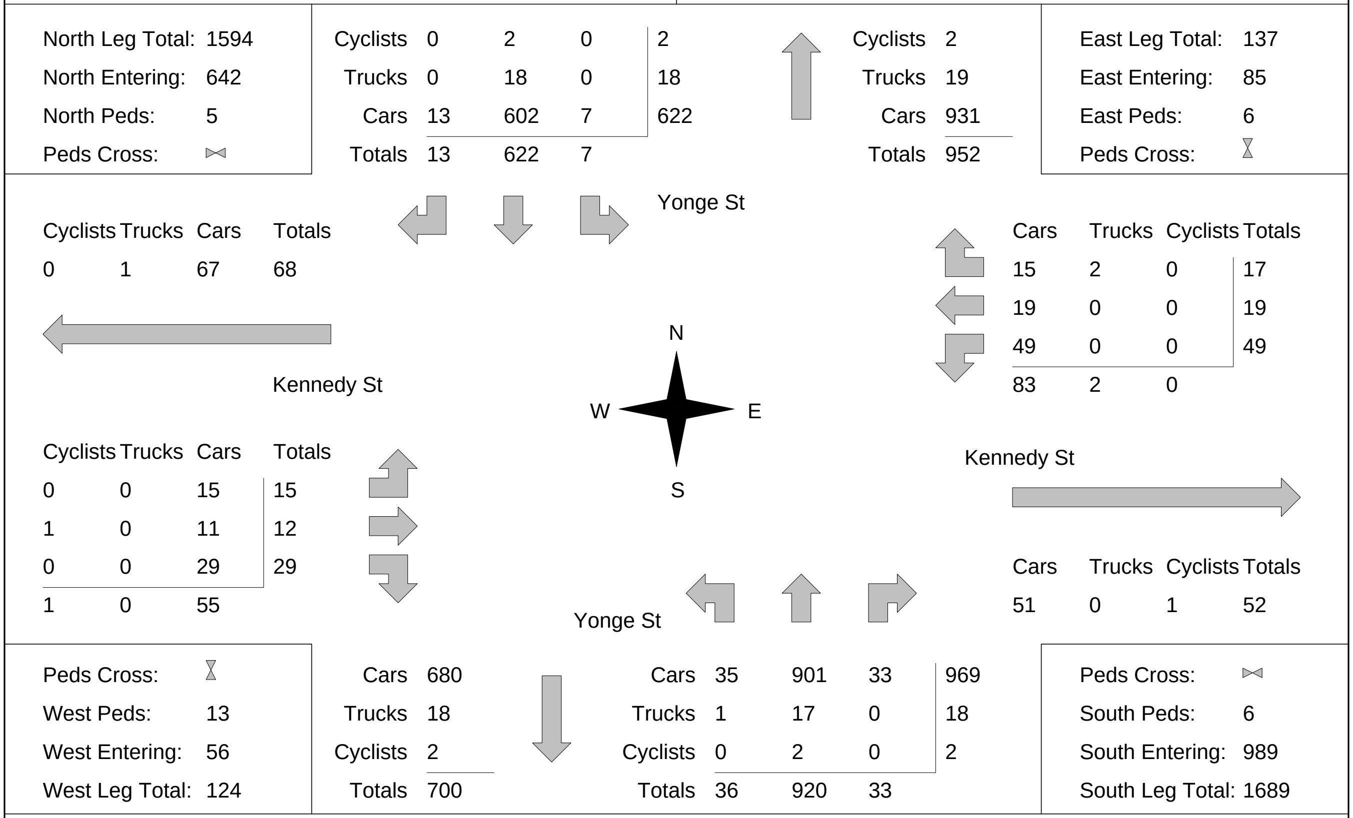
Municipality: Aurora
Site #: 1825300005
Intersection: Yonge St & Kennedy St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 1594
North Entering: 642
North Peds: 5
Peds Cross: ⋈

Cyclists	0	2	0	2
Trucks	0	18	0	18
Cars	13	602	7	622
Totals	13	622	7	

Cyclists	2
Trucks	19
Cars	931
Totals	952

East Leg Total: 137
East Entering: 85
East Peds: 6
Peds Cross: ⧗

Cyclists	Trucks	Cars	Totals
0	1	67	68

Cars	Trucks	Cyclists	Totals
15	2	0	17
19	0	0	19
49	0	0	49
83	2	0	

Cyclists	Trucks	Cars	Totals
0	0	15	15
1	0	11	12
0	0	29	29
1	0	55	

Cars	Trucks	Cyclists	Totals
51	0	1	52

Peds Cross: ⧗
West Peds: 13
West Entering: 56
West Leg Total: 124

Cars	680
Trucks	18
Cyclists	2
Totals	700

Cars	35	901	33	969
Trucks	1	17	0	18
Cyclists	0	2	0	2
Totals	36	920	33	

Peds Cross: ⋈
South Peds: 6
South Entering: 989
South Leg Total: 1689

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Aurora
Site #: 1825300005
Intersection: Yonge St & Kennedy St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

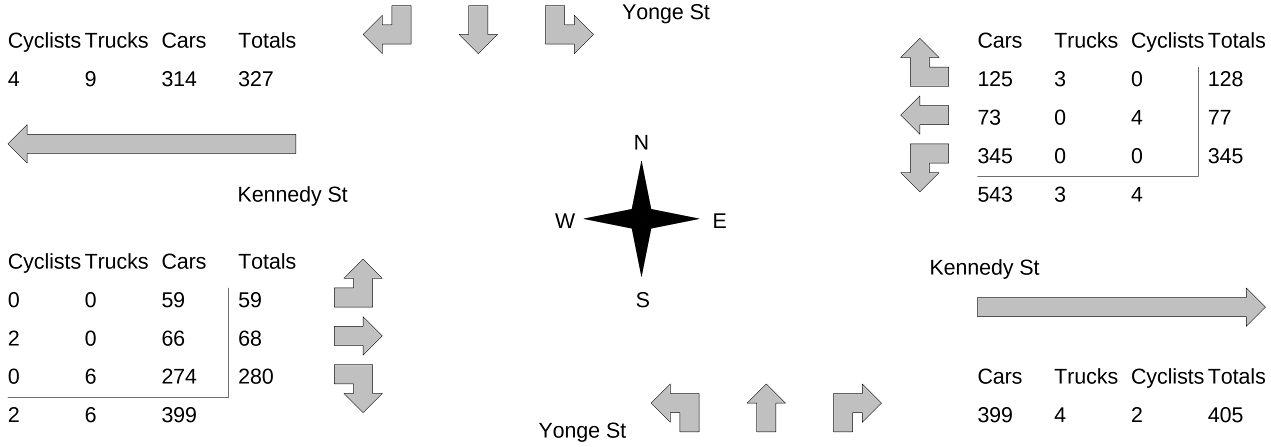
Major Road: Yonge St runs N/S

North Leg Total:	10339
North Entering:	5112
North Peds:	24
Peds Cross:	⋈

Cyclists	0	6	0	6
Trucks	4	157	2	163
Cars	58	4766	119	4943
Totals	62	4929	121	

Cyclists	10
Trucks	141
Cars	5076
Totals	5227

East Leg Total:	955
East Entering:	550
East Peds:	79
Peds Cross:	⧗



Cyclists	Trucks	Cars	Totals
4	9	314	327

Cars	Trucks	Cyclists	Totals
125	3	0	128
73	0	4	77
345	0	0	345
543	3	4	

Cyclists	Trucks	Cars	Totals
0	0	59	59
2	0	66	68
0	6	274	280
2	6	399	

Cars	Trucks	Cyclists	Totals
399	4	2	405

Peds Cross:	⧗
West Peds:	94
West Entering:	407
West Leg Total:	734

Cars	5385
Trucks	163
Cyclists	6
Totals	5554

Cars	183	4892	214	5289
Trucks	5	138	2	145
Cyclists	0	10	0	10
Totals	188	5040	216	

Peds Cross:	⋈
South Peds:	47
South Entering:	5444
South Leg Total:	10998

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Kennedy St | **Count Date:** 27-Jun-18 | **Municipality:** Aurora

North Approach Totals						North/South Total Approaches	South Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	13	574	3	590	2	966	8:00:00	9	356	11	376	2
9:00:00	19	658	6	683	2	1184	9:00:00	13	464	24	501	4
10:00:00	18	604	0	622	2	1181	10:00:00	21	517	21	559	7
12:00:00	12	319	7	338	3	702	12:00:00	15	336	13	364	2
13:00:00	18	630	11	659	3	1391	13:00:00	14	675	43	732	12
16:00:00	17	617	15	649	4	1406	16:00:00	36	682	39	757	9
17:00:00	9	615	5	629	4	1545	17:00:00	24	858	34	916	3
18:00:00	12	617	12	641	3	1519	18:00:00	32	826	20	878	8
Totals:	118	4634	59	4811	23	9894		164	4714	205	5083	47

East Approach Totals						East/West Total Approaches	West Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	11	2	3	16	2	64	8:00:00	4	6	38	48	9
9:00:00	39	2	11	52	5	106	9:00:00	7	10	37	54	10
10:00:00	49	5	14	68	10	109	10:00:00	3	5	33	41	13
12:00:00	30	3	10	43	4	70	12:00:00	1	4	22	27	11
13:00:00	48	14	25	87	21	141	13:00:00	7	9	38	54	8
16:00:00	49	10	15	74	11	133	16:00:00	10	9	40	59	11
17:00:00	59	17	23	99	11	144	17:00:00	13	9	23	45	8
18:00:00	41	19	20	80	7	137	18:00:00	11	9	37	57	20
Totals:	326	72	121	519	71	904		56	61	268	385	90

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	25	62	66	40	84	82	96	82

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300005

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	118	118	1	1	0	0	6	6	0	0	0	0	0	0	0	0	0	0
7:30:00	5	4	250	132	1	0	0	0	8	2	0	0	0	0	0	0	0	0	0	0
7:45:00	9	4	414	164	2	1	0	0	12	4	1	1	0	0	0	0	0	0	1	1
8:00:00	13	4	557	143	2	0	0	0	17	5	1	0	0	0	0	0	0	0	2	1
8:15:00	17	4	715	158	3	1	0	0	24	7	1	0	0	0	0	0	0	0	2	0
8:30:00	21	4	876	161	3	0	0	0	31	7	2	1	0	0	0	0	0	0	3	1
8:45:00	27	6	1033	157	6	3	0	0	37	6	3	1	0	0	0	0	0	0	3	0
9:00:00	32	5	1190	157	6	0	0	0	42	5	3	0	0	0	0	0	0	0	4	1
9:15:00	37	5	1361	171	6	0	0	0	50	8	3	0	0	0	0	0	0	0	4	0
9:30:00	43	6	1485	124	6	0	1	1	56	6	3	0	0	0	0	0	0	0	4	0
9:45:00	48	5	1630	145	6	0	1	0	65	9	3	0	0	0	0	0	0	0	6	2
10:00:00	49	1	1766	136	6	0	1	0	69	4	3	0	0	0	1	1	0	0	6	0
10:00:41	49	0	1766	0	6	0	1	0	69	0	3	0	0	0	1	0	0	0	6	0
11:30:00	49	0	1766	0	6	0	1	0	69	0	3	0	0	0	1	0	0	0	6	0
11:45:00	58	9	1909	143	10	4	1	0	72	3	3	0	0	0	1	0	0	0	6	0
12:00:00	61	3	2078	169	12	2	1	0	76	4	4	1	0	0	1	0	0	0	9	3
12:15:00	64	3	2217	139	16	4	1	0	83	7	4	0	0	0	1	0	0	0	9	0
12:30:00	70	6	2375	158	18	2	1	0	87	4	4	0	0	0	1	0	0	0	9	0
12:45:00	75	5	2515	140	20	2	1	0	92	5	4	0	0	0	1	0	0	0	11	2
13:00:00	79	4	2687	172	23	3	1	0	96	4	4	0	0	0	2	1	0	0	12	1
13:15:00	86	7	2853	166	25	2	1	0	102	6	4	0	0	0	2	0	0	0	12	0
13:30:00	92	6	3000	147	29	4	1	0	105	3	4	0	0	0	3	1	0	0	12	0
13:30:50	92	0	3000	0	29	0	1	0	105	0	4	0	0	0	3	0	0	0	12	0
15:30:00	92	0	3000	0	29	0	1	0	105	0	4	0	0	0	3	0	0	0	12	0
15:45:00	96	4	3149	149	33	4	1	0	111	6	4	0	0	0	3	0	0	0	15	3
16:00:00	96	0	3280	131	38	5	1	0	119	8	4	0	0	0	3	0	0	0	16	1
16:15:00	98	2	3444	164	41	3	1	0	122	3	4	0	0	0	3	0	0	0	17	1
16:30:00	101	3	3591	147	41	0	1	0	124	2	4	0	0	0	4	1	0	0	17	0
16:45:00	104	3	3715	124	41	0	1	0	129	5	4	0	0	0	4	0	0	0	18	1
17:00:00	105	1	3878	163	43	2	1	0	133	4	4	0	0	0	6	2	0	0	20	2
17:15:00	107	2	4031	153	50	7	1	0	139	6	4	0	0	0	6	0	0	0	21	1
17:30:00	108	1	4193	162	54	4	1	0	142	3	4	0	0	0	6	0	0	0	22	1
17:45:00	113	5	4335	142	54	0	2	1	146	4	4	0	0	0	6	0	0	0	23	1
18:00:00	116	3	4478	143	55	1	2	0	150	4	4	0	0	0	6	0	0	0	23	0
18:15:00	117	1	4637	159	56	1	2	0	152	2	4	0	0	0	6	0	0	0	24	1
18:30:00	119	2	4766	129	58	2	2	0	157	5	4	0	0	0	6	0	0	0	24	0
18:45:00	119	0	4766	0	58	0	2	0	157	0	4	0	0	0	6	0	0	0	24	0
18:46:18	119	0	4766	0	58	0	2	0	157	0	4	0	0	0	6	0	0	0	24	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300005

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	6	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
8:00:00	11	5	2	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:15:00	18	7	2	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:30:00	26	8	2	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	3	1
8:45:00	37	11	4	2	12	3	0	0	0	0	0	0	0	0	0	0	0	0	5	2
9:00:00	50	13	4	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	7	2
9:15:00	64	14	5	1	17	3	0	0	0	0	0	0	0	0	0	0	0	0	8	1
9:30:00	75	11	5	0	20	3	0	0	0	0	0	0	0	0	0	0	0	0	10	2
9:45:00	87	12	5	0	24	4	0	0	0	0	0	0	0	0	0	0	0	0	13	3
10:00:00	99	12	9	4	28	4	0	0	0	0	0	0	0	0	0	0	0	0	17	4
10:00:41	99	0	9	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
11:30:00	99	0	9	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
11:45:00	115	16	11	2	33	5	0	0	0	0	0	0	0	0	0	0	0	0	19	2
12:00:00	129	14	11	0	38	5	0	0	0	0	0	0	0	0	1	1	0	0	21	2
12:15:00	148	19	13	2	45	7	0	0	0	0	1	1	0	0	1	0	0	0	26	5
12:30:00	162	14	15	2	50	5	0	0	0	0	1	0	0	0	2	1	0	0	33	7
12:45:00	168	6	16	1	55	5	0	0	0	0	1	0	0	0	2	0	0	0	40	7
13:00:00	177	9	24	8	62	7	0	0	0	0	1	0	0	0	2	0	0	0	42	2
13:15:00	190	13	30	6	64	2	0	0	0	0	1	0	0	0	2	0	0	0	44	2
13:30:00	204	14	30	0	67	3	0	0	0	0	1	0	0	0	2	0	0	0	49	5
13:30:50	204	0	30	0	67	0	0	0	0	0	1	0	0	0	2	0	0	0	49	0
15:30:00	204	0	30	0	67	0	0	0	0	0	1	0	0	0	2	0	0	0	49	0
15:45:00	214	10	33	3	73	6	0	0	0	0	1	0	0	0	2	0	0	0	51	2
16:00:00	226	12	34	1	77	4	0	0	0	0	1	0	0	0	2	0	0	0	53	2
16:15:00	244	18	39	5	82	5	0	0	0	0	1	0	0	0	2	0	0	0	55	2
16:30:00	259	15	42	3	90	8	0	0	0	0	1	0	0	0	2	0	0	0	60	5
16:45:00	274	15	46	4	93	3	0	0	0	0	2	1	0	0	2	0	0	0	62	2
17:00:00	285	11	51	5	99	6	0	0	0	0	2	0	0	0	2	0	0	0	64	2
17:15:00	302	17	57	6	102	3	0	0	0	0	2	0	0	0	2	0	0	0	64	0
17:30:00	308	6	61	4	105	3	0	0	0	0	3	1	0	0	2	0	0	0	66	2
17:45:00	317	9	65	4	112	7	0	0	0	0	3	0	0	0	2	0	0	0	68	2
18:00:00	326	9	68	3	118	6	0	0	0	0	3	0	0	0	4	2	0	0	71	3
18:15:00	337	11	72	4	120	2	0	0	0	0	3	0	0	0	4	0	0	0	75	4
18:30:00	345	8	73	1	125	5	0	0	0	0	3	0	0	0	4	0	0	0	79	4
18:45:00	345	0	73	0	125	0	0	0	0	0	3	0	0	0	4	0	0	0	79	0
18:46:18	345	0	73	0	125	0	0	0	0	0	3	0	0	0	4	0	0	0	79	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300005

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	68	68	1	1	0	0	5	5	0	0	0	0	0	0	0	0	0	0
7:30:00	2	2	137	69	3	2	0	0	10	5	0	0	0	0	0	0	0	0	2	2
7:45:00	4	2	230	93	5	2	0	0	14	4	0	0	0	0	1	1	0	0	2	0
8:00:00	8	4	335	105	11	6	1	1	20	6	0	0	0	0	1	0	0	0	2	0
8:15:00	11	3	443	108	14	3	1	0	26	6	0	0	0	0	2	1	0	0	2	0
8:30:00	12	1	545	102	21	7	1	0	27	1	0	0	0	0	2	0	0	0	3	1
8:45:00	18	6	658	113	24	3	1	0	31	4	0	0	0	0	2	0	0	0	5	2
9:00:00	21	3	782	124	35	11	1	0	36	5	0	0	0	0	2	0	0	0	6	1
9:15:00	25	4	924	142	39	4	1	0	40	4	0	0	0	0	3	1	0	0	7	1
9:30:00	29	4	1048	124	44	5	1	0	46	6	0	0	0	0	3	0	0	0	10	3
9:45:00	35	6	1164	116	49	5	2	1	52	6	0	0	0	0	3	0	0	0	12	2
10:00:00	41	6	1277	113	56	7	2	0	57	5	0	0	0	0	3	0	0	0	13	1
10:00:41	41	0	1277	0	56	0	2	0	57	0	0	0	0	0	3	0	0	0	13	0
11:30:00	41	0	1277	0	56	0	2	0	57	0	0	0	0	0	3	0	0	0	13	0
11:45:00	48	7	1439	162	63	7	2	0	62	5	0	0	0	0	3	0	0	0	14	1
12:00:00	55	7	1602	163	68	5	3	1	67	5	1	1	0	0	4	1	0	0	15	1
12:15:00	59	4	1771	169	77	9	4	1	72	5	1	0	0	0	4	0	0	0	15	0
12:30:00	63	4	1935	164	90	13	4	0	74	2	1	0	0	0	5	1	0	0	19	4
12:45:00	66	3	2097	162	101	11	4	0	75	1	1	0	0	0	5	0	0	0	23	4
13:00:00	68	2	2264	167	111	10	4	0	79	4	1	0	0	0	5	0	0	0	27	4
13:15:00	75	7	2436	172	121	10	4	0	83	4	1	0	0	0	5	0	0	0	29	2
13:30:00	87	12	2603	167	133	12	4	0	85	2	1	0	0	0	6	1	0	0	33	4
13:30:50	87	0	2603	0	133	0	4	0	85	0	1	0	0	0	6	0	0	0	33	0
15:30:00	87	0	2603	0	133	0	4	0	85	0	1	0	0	0	6	0	0	0	33	0
15:45:00	97	10	2765	162	142	9	4	0	92	7	2	1	0	0	6	0	0	0	34	1
16:00:00	104	7	2928	163	149	7	4	0	95	3	2	0	0	0	7	1	0	0	36	2
16:15:00	107	3	3119	191	159	10	4	0	100	5	2	0	0	0	8	1	0	0	37	1
16:30:00	112	5	3306	187	166	7	4	0	103	3	2	0	0	0	8	0	0	0	37	0
16:45:00	122	10	3531	225	177	11	5	1	107	4	2	0	0	0	9	1	0	0	39	2
17:00:00	127	5	3768	237	183	6	5	0	111	4	2	0	0	0	9	0	0	0	39	0
17:15:00	140	13	4006	238	194	11	5	0	116	5	2	0	0	0	9	0	0	0	43	4
17:30:00	147	7	4207	201	199	5	5	0	120	4	2	0	0	0	10	1	0	0	43	0
17:45:00	153	6	4388	181	201	2	5	0	125	5	2	0	0	0	10	0	0	0	43	0
18:00:00	159	6	4574	186	203	2	5	0	130	5	2	0	0	0	10	0	0	0	47	4
18:15:00	173	14	4731	157	209	6	5	0	134	4	2	0	0	0	10	0	0	0	47	0
18:30:00	183	10	4892	161	214	5	5	0	138	4	2	0	0	0	10	0	0	0	47	0
18:45:00	183	0	4892	0	214	0	5	0	138	0	2	0	0	0	10	0	0	0	47	0
18:46:18	183	0	4892	0	214	0	5	0	138	0	2	0	0	0	10	0	0	0	47	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300005**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7:30:00	1	1	3	3	19	9	0	0	0	0	1	1	0	0	0	0	0	0	6	4
7:45:00	2	1	4	1	23	4	0	0	0	0	1	0	0	0	0	0	0	0	8	2
8:00:00	4	2	6	2	37	14	0	0	0	0	1	0	0	0	0	0	0	0	9	1
8:15:00	5	1	9	3	45	8	0	0	0	0	3	2	0	0	0	0	0	0	13	4
8:30:00	8	3	12	3	53	8	0	0	0	0	3	0	0	0	0	0	0	0	13	0
8:45:00	9	1	13	1	64	11	0	0	0	0	3	0	0	0	0	0	0	0	16	3
9:00:00	11	2	16	3	72	8	0	0	0	0	3	0	0	0	0	0	0	0	19	3
9:15:00	11	0	17	1	79	7	0	0	0	0	3	0	0	0	0	0	0	0	23	4
9:30:00	12	1	19	2	91	12	0	0	0	0	4	1	0	0	0	0	0	0	25	2
9:45:00	14	2	19	0	97	6	0	0	0	0	4	0	0	0	0	0	0	0	30	5
10:00:00	14	0	21	2	104	7	0	0	0	0	4	0	0	0	0	0	0	0	32	2
10:00:41	14	0	21	0	104	0	0	0	0	0	4	0	0	0	0	0	0	0	32	0
11:30:00	14	0	21	0	104	0	0	0	0	0	4	0	0	0	0	0	0	0	32	0
11:45:00	14	0	21	0	112	8	0	0	0	0	4	0	0	0	0	0	0	0	35	3
12:00:00	15	1	24	3	126	14	0	0	0	0	4	0	0	0	1	1	0	0	43	8
12:15:00	19	4	27	3	139	13	0	0	0	0	4	0	0	0	1	0	0	0	46	3
12:30:00	21	2	29	2	150	11	0	0	0	0	4	0	0	0	1	0	0	0	46	0
12:45:00	22	1	31	2	154	4	0	0	0	0	4	0	0	0	1	0	0	0	49	3
13:00:00	22	0	33	2	164	10	0	0	0	0	4	0	0	0	1	0	0	0	51	2
13:15:00	24	2	35	2	175	11	0	0	0	0	4	0	0	0	1	0	0	0	52	1
13:30:00	25	1	39	4	184	9	0	0	0	0	4	0	0	0	1	0	0	0	56	4
13:30:50	25	0	39	0	184	0	0	0	0	0	4	0	0	0	1	0	0	0	56	0
15:30:00	25	0	39	0	184	0	0	0	0	0	4	0	0	0	1	0	0	0	56	0
15:45:00	30	5	41	2	195	11	0	0	0	0	4	0	0	0	1	0	0	0	59	3
16:00:00	32	2	42	1	203	8	0	0	0	0	5	1	0	0	1	0	0	0	62	3
16:15:00	35	3	44	2	206	3	0	0	0	0	5	0	0	0	1	0	0	0	63	1
16:30:00	36	1	44	0	214	8	0	0	0	0	5	0	0	0	1	0	0	0	65	2
16:45:00	43	7	45	1	219	5	0	0	0	0	5	0	0	0	2	1	0	0	66	1
17:00:00	45	2	50	5	226	7	0	0	0	0	5	0	0	0	2	0	0	0	70	4
17:15:00	47	2	53	3	232	6	0	0	0	0	5	0	0	0	2	0	0	0	72	2
17:30:00	51	4	55	2	243	11	0	0	0	0	5	0	0	0	2	0	0	0	78	6
17:45:00	53	2	57	2	257	14	0	0	0	0	5	0	0	0	2	0	0	0	85	7
18:00:00	56	3	59	2	263	6	0	0	0	0	5	0	0	0	2	0	0	0	90	5
18:15:00	58	2	61	2	267	4	0	0	0	0	6	1	0	0	2	0	0	0	94	4
18:30:00	59	1	66	5	274	7	0	0	0	0	6	0	0	0	2	0	0	0	94	0
18:45:00	59	0	66	0	274	0	0	0	0	0	6	0	0	0	2	0	0	0	94	0
18:46:18	59	0	66	0	274	0	0	0	0	0	6	0	0	0	2	0	0	0	94	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period		**One Hour Peak**	
From:	7:00:00	**From:**	8:15:00
To:	10:00:00	**To:**	9:15:00

Municipality: Aurora
Site #: 1825300006
Intersection: Yonge St & Golf Links Dr-Dunning
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total:	1278
North Entering:	730
North Peds:	29
Peds Cross:	⋈

Cyclists	0	1	0	1
Trucks	2	23	0	25
Cars	33	615	56	704
Totals	35	639	56	

Cyclists	1
Trucks	15
Cars	532
Totals	548

East Leg Total:	351
East Entering:	140
East Peds:	57
Peds Cross:	⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	2	153	155

Cars	Trucks	Cyclists	Totals
38	0	1	39
50	0	0	50
51	0	0	51
139	0	1	

Golf Links Dr

N

W E

S

Dunning Ave

Cyclists	Trucks	Cars	Totals
0	0	45	45
5	3	73	81
0	0	42	42
5	3	160	

Cars	Trucks	Cyclists	Totals
202	3	6	211

Yonge St

Peds Cross:	⧗
West Peds:	37
West Entering:	168
West Leg Total:	323

Cars	708
Trucks	23
Cyclists	1
Totals	732

Cars	70	449	73	592
Trucks	0	15	0	15
Cyclists	0	0	1	1
Totals	70	464	74	

Peds Cross:	⋈
South Peds:	32
South Entering:	608
South Leg Total:	1340

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 11:30:00
To: 12:30:00

Municipality: Aurora
Site #: 1825300006
Intersection: Yonge St & Golf Links Dr-Dunning
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1484
North Entering: 739
North Peds: 27
Peds Cross: ⋈

Cyclists	0	1	0	1
Trucks	0	18	1	19
Cars	33	626	60	719
Totals	33	645	61	

Cyclists	1
Trucks	17
Cars	727
Totals	745

East Leg Total: 299
East Entering: 174
East Peds: 43
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
4	4	142	150

Golf Links Dr

Cars	Trucks	Cyclists	Totals
60	1	1	62
41	2	4	47
64	0	1	65
165	3	6	

N
W E
S

Cyclists	Trucks	Cars	Totals
0	2	31	33
1	0	29	30
0	0	34	34
1	2	94	

Dunning Ave

Cars	Trucks	Cyclists	Totals
121	3	1	125

Yonge St

Peds Cross: ⧗
West Peds: 42
West Entering: 97
West Leg Total: 247

Cars	724
Trucks	18
Cyclists	2
Totals	744

Cars	68	636	32	736
Trucks	2	14	2	18
Cyclists	0	0	0	0
Totals	70	650	34	

Peds Cross: ⋈
South Peds: 28
South Entering: 754
South Leg Total: 1498

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:15:00
To: 17:15:00

Municipality: Aurora
Site #: 1825300006
Intersection: Yonge St & Golf Links Dr-Dunning
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

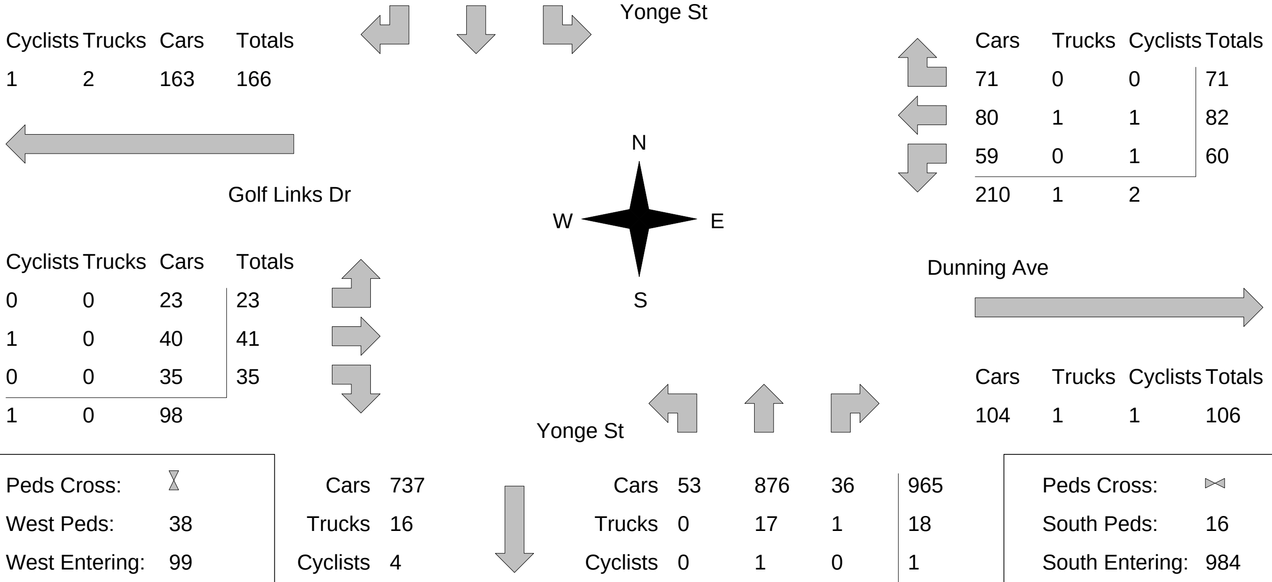
Major Road: Yonge St runs N/S

North Leg Total: 1709
North Entering: 721
North Peds: 29
Peds Cross: ⋈

Cyclists	0	3	0	3
Trucks	1	16	0	17
Cars	30	643	28	701
Totals	31	662	28	

Cyclists	1
Trucks	17
Cars	970
Totals	988

East Leg Total: 319
East Entering: 213
East Peds: 18
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
1	2	163	166

Cars	Trucks	Cyclists	Totals
71	0	0	71
80	1	1	82
59	0	1	60
210	1	2	

Cyclists	Trucks	Cars	Totals
0	0	23	23
1	0	40	41
0	0	35	35
1	0	98	

Cars	Trucks	Cyclists	Totals
104	1	1	106

Peds Cross: ⧗
West Peds: 38
West Entering: 99
West Leg Total: 265

Cars	737
Trucks	16
Cyclists	4
Totals	757

Cars	53	876	36	965
Trucks	0	17	1	18
Cyclists	0	1	0	1
Totals	53	894	37	

Peds Cross: ⋈
South Peds: 16
South Entering: 984
South Leg Total: 1741

Comments

Ontario Traffic Inc.

Total Count Diagram

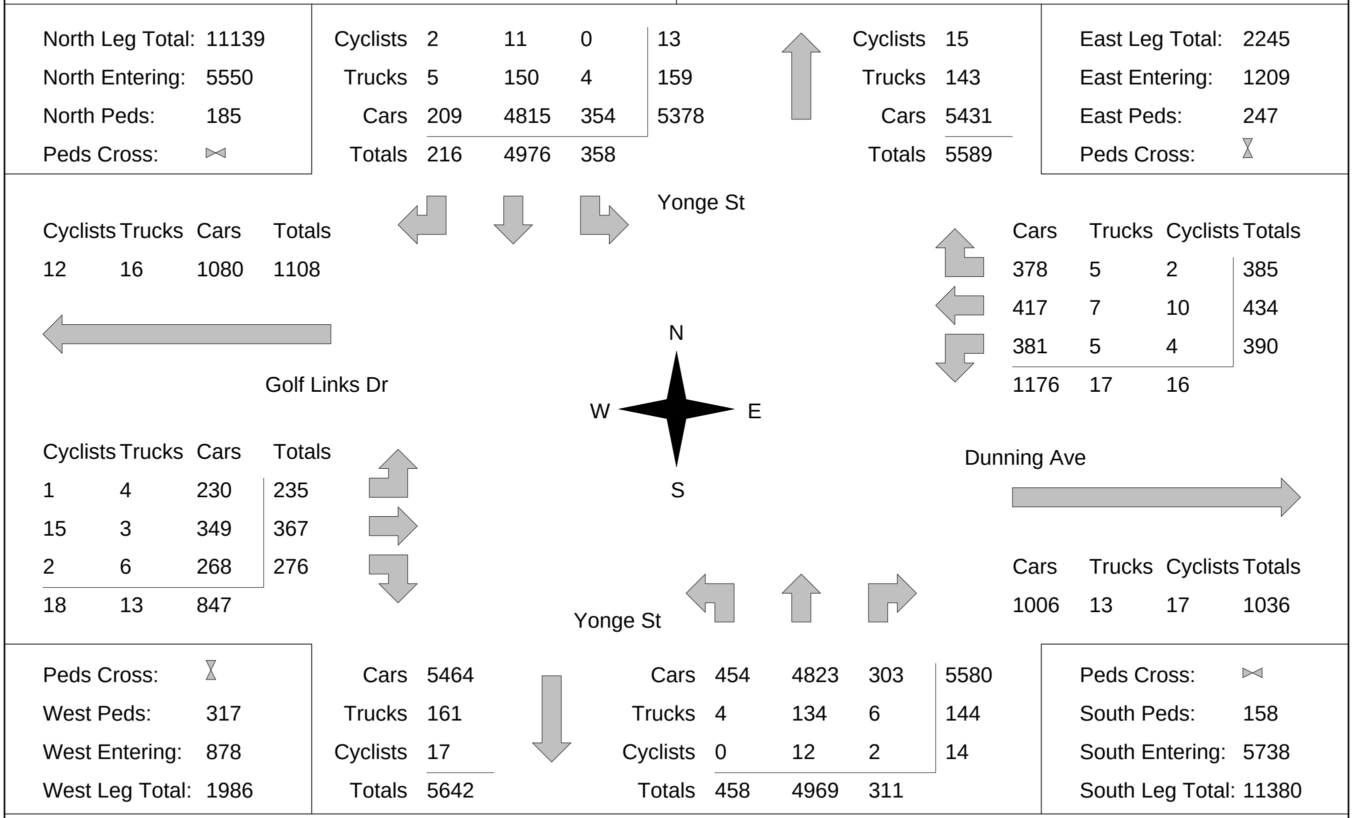
Municipality: Aurora
Site #: 1825300006
Intersection: Yonge St & Golf Links Dr-Dunning
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 11139
North Entering: 5550
North Peds: 185
Peds Cross: ⋈

Cyclists	2	11	0	13
Trucks	5	150	4	159
Cars	209	4815	354	5378
Totals	216	4976	358	

Cyclists	15
Trucks	143
Cars	5431
Totals	5589

East Leg Total: 2245
East Entering: 1209
East Peds: 247
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
12	16	1080	1108

Cars	Trucks	Cyclists	Totals
378	5	2	385
417	7	10	434
381	5	4	390
1176	17	16	

Golf Links Dr

Cyclists	Trucks	Cars	Totals
1	4	230	235
15	3	349	367
2	6	268	276
18	13	847	

Dunning Ave

Cars	Trucks	Cyclists	Totals
1006	13	17	1036

Yonge St

Peds Cross: ⧗
West Peds: 317
West Entering: 878
West Leg Total: 1986

Cars	5464
Trucks	161
Cyclists	17
Totals	5642

Cars	454	4823	303	5580
Trucks	4	134	6	144
Cyclists	0	12	2	14
Totals	458	4969	311	

Peds Cross: ⋈
South Peds: 158
South Entering: 5738
South Leg Total: 11380

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Golf Links Dr-Dunning **Count Date:** 27-Jun-18 **Municipality:** Aurora

North Approach Totals						North/South Total Approaches	South Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	43	574	16	633	18	1055	8:00:00	33	363	26	422	7
9:00:00	66	622	27	715	38	1329	9:00:00	70	461	83	614	28
10:00:00	55	575	37	667	14	1259	10:00:00	61	507	24	592	18
12:00:00	29	313	18	360	14	737	12:00:00	30	327	20	377	15
13:00:00	54	659	28	741	28	1485	13:00:00	70	649	25	744	30
16:00:00	37	629	33	699	21	1474	16:00:00	64	675	36	775	17
17:00:00	33	651	30	714	20	1643	17:00:00	53	834	42	929	15
18:00:00	30	635	19	684	28	1582	18:00:00	52	814	32	898	22
Totals:	347	4658	208	5213	181	10564		433	4630	288	5351	152

East Approach Totals						East/West Total Approaches	West Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds		Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	31	31	23	85	11	182	8:00:00	21	58	18	97	29
9:00:00	56	48	37	141	55	313	9:00:00	44	87	41	172	35
10:00:00	27	40	35	102	36	212	10:00:00	33	33	44	110	41
12:00:00	26	20	28	74	17	131	12:00:00	18	18	21	57	24
13:00:00	64	52	63	179	47	263	13:00:00	28	24	32	84	56
16:00:00	56	46	46	148	33	264	16:00:00	34	42	40	116	39
17:00:00	57	79	63	199	20	303	17:00:00	29	39	36	104	36
18:00:00	49	72	73	194	19	287	18:00:00	21	42	30	93	51
Totals:	366	388	368	1122	238	1955		228	343	262	833	311

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	135	253	132	93	202	174	200	192

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300006

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	9	9	117	117	2	2	0	0	5	5	0	0	0	0	0	0	0	0	3	3
7:30:00	24	15	248	131	4	2	0	0	11	6	0	0	0	0	0	0	0	0	4	1
7:45:00	27	3	423	175	8	4	0	0	15	4	0	0	0	0	1	1	0	0	10	6
8:00:00	43	16	551	128	16	8	0	0	22	7	0	0	0	0	1	0	0	0	18	8
8:15:00	63	20	709	158	16	0	0	0	28	6	0	0	0	0	1	0	0	0	32	14
8:30:00	70	7	871	162	24	8	0	0	34	6	0	0	0	0	2	1	0	0	40	8
8:45:00	83	13	1013	142	35	11	0	0	40	6	0	0	0	0	2	0	0	0	48	8
9:00:00	109	26	1149	136	43	8	0	0	45	5	0	0	0	0	2	0	0	0	56	8
9:15:00	119	10	1324	175	49	6	0	0	51	6	2	2	0	0	2	0	0	0	61	5
9:30:00	135	16	1449	125	55	6	0	0	56	5	2	0	0	0	2	0	0	0	63	2
9:45:00	145	10	1574	125	66	11	0	0	61	5	3	1	0	0	2	0	0	0	64	1
10:00:00	163	18	1701	127	77	11	1	1	67	6	3	0	0	0	3	1	0	0	70	6
10:00:32	163	0	1701	0	77	0	1	0	67	0	3	0	0	0	3	0	0	0	70	0
11:30:00	163	0	1701	0	77	0	1	0	67	0	3	0	0	0	3	0	0	0	70	0
11:45:00	177	14	1842	141	87	10	1	0	70	3	3	0	0	0	4	1	0	0	77	7
12:00:00	192	15	2006	164	95	8	1	0	74	4	3	0	0	0	4	0	0	0	84	7
12:15:00	205	13	2165	159	103	8	1	0	81	7	3	0	0	0	4	0	0	0	90	6
12:30:00	223	18	2327	162	110	7	2	1	85	4	3	0	0	0	4	0	0	0	97	7
12:45:00	233	10	2479	152	110	0	3	1	89	4	3	0	0	0	4	0	0	0	102	5
13:00:00	244	11	2645	166	123	13	3	0	93	4	3	0	0	0	5	1	0	0	112	10
13:15:00	249	5	2817	172	134	11	3	0	97	4	3	0	0	0	5	0	0	0	118	6
13:30:00	264	15	2969	152	139	5	3	0	100	3	4	1	0	0	6	1	0	0	121	3
13:30:31	264	0	2969	0	139	0	3	0	100	0	4	0	0	0	6	0	0	0	121	0
15:30:00	264	0	2969	0	139	0	3	0	100	0	4	0	0	0	6	0	0	0	121	0
15:45:00	275	11	3118	149	147	8	3	0	105	5	4	0	0	0	6	0	1	1	125	4
16:00:00	281	6	3254	136	154	7	3	0	112	7	4	0	0	0	6	0	1	0	133	8
16:15:00	292	11	3415	161	159	5	3	0	115	3	4	0	0	0	7	1	1	0	136	3
16:30:00	301	9	3577	162	168	9	3	0	118	3	4	0	0	0	7	0	1	0	144	8
16:45:00	306	5	3722	145	174	6	3	0	123	5	5	1	0	0	9	2	1	0	152	8
17:00:00	314	8	3888	166	183	9	3	0	126	3	5	0	0	0	9	0	1	0	153	1
17:15:00	320	6	4058	170	189	6	3	0	131	5	5	0	0	0	10	1	1	0	165	12
17:30:00	326	6	4221	163	192	3	3	0	136	5	5	0	0	0	10	0	1	0	174	9
17:45:00	334	8	4374	153	196	4	3	0	139	3	5	0	0	0	10	0	1	0	177	3
18:00:00	343	9	4506	132	201	5	4	1	142	3	5	0	0	0	10	0	2	1	181	4
18:15:00	351	8	4678	172	205	4	4	0	145	3	5	0	0	0	10	0	2	0	185	4
18:30:00	354	3	4815	137	209	4	4	0	150	5	5	0	0	0	11	1	2	0	185	0
18:45:00	354	0	4815	0	209	0	4	0	150	0	5	0	0	0	11	0	2	0	185	0
18:46:19	354	0	4815	0	209	0	4	0	150	0	5	0	0	0	11	0	2	0	185	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300006

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	8	8	9	9	5	5	0	0	1	1	0	0	0	0	0	0	0	0	3	3
7:30:00	11	3	13	4	11	6	0	0	1	0	0	0	0	0	0	0	0	0	4	1
7:45:00	15	4	21	8	15	4	0	0	2	1	0	0	0	0	0	0	0	0	7	3
8:00:00	30	15	29	8	22	7	1	1	2	0	1	1	0	0	0	0	0	0	11	4
8:15:00	40	10	37	8	28	6	1	0	2	0	3	2	0	0	0	0	0	0	24	13
8:30:00	55	15	52	15	38	10	1	0	2	0	3	0	0	0	0	0	0	0	28	4
8:45:00	78	23	68	16	47	9	1	0	2	0	3	0	0	0	0	0	0	0	47	19
9:00:00	86	8	77	9	57	10	1	0	2	0	3	0	0	0	0	0	0	0	66	19
9:15:00	91	5	87	10	66	9	1	0	2	0	3	0	0	0	0	0	1	1	81	15
9:30:00	96	5	95	8	71	5	1	0	2	0	3	0	0	0	1	1	1	0	87	6
9:45:00	104	8	106	11	77	6	1	0	2	0	3	0	0	0	1	0	1	0	94	7
10:00:00	113	9	116	10	91	14	1	0	2	0	3	0	0	0	1	0	1	0	102	8
10:00:32	113	0	116	0	91	0	1	0	2	0	3	0	0	0	1	0	1	0	102	0
11:30:00	113	0	116	0	91	0	1	0	2	0	3	0	0	0	1	0	1	0	102	0
11:45:00	125	12	124	8	102	11	1	0	3	1	4	1	0	0	1	0	2	1	111	9
12:00:00	139	14	133	9	117	15	1	0	3	0	4	0	0	0	3	2	2	0	119	8
12:15:00	161	22	143	10	136	19	1	0	3	0	4	0	1	1	5	2	2	0	133	14
12:30:00	177	16	157	14	151	15	1	0	4	1	4	0	1	0	5	0	2	0	145	12
12:45:00	188	11	170	13	168	17	1	0	4	0	4	0	1	0	6	1	2	0	160	15
13:00:00	201	13	180	10	180	12	2	1	4	0	4	0	1	0	7	1	2	0	166	6
13:15:00	213	12	185	5	193	13	3	1	4	0	4	0	1	0	7	0	2	0	168	2
13:30:00	230	17	193	8	202	9	5	2	4	0	4	0	1	0	7	0	2	0	177	9
13:30:31	230	0	193	0	202	0	5	0	4	0	4	0	1	0	7	0	2	0	177	0
15:30:00	230	0	193	0	202	0	5	0	4	0	4	0	1	0	7	0	2	0	177	0
15:45:00	242	12	205	12	213	11	5	0	5	1	4	0	1	0	7	0	2	0	185	8
16:00:00	254	12	224	19	226	13	5	0	5	0	4	0	1	0	8	1	2	0	199	14
16:15:00	266	12	244	20	242	16	5	0	5	0	4	0	1	0	9	1	2	0	204	5
16:30:00	283	17	262	18	260	18	5	0	6	1	4	0	2	1	9	0	2	0	208	4
16:45:00	297	14	283	21	277	17	5	0	6	0	4	0	2	0	10	1	2	0	214	6
17:00:00	310	13	300	17	289	12	5	0	6	0	4	0	2	0	10	0	2	0	219	5
17:15:00	325	15	324	24	313	24	5	0	6	0	4	0	2	0	10	0	2	0	222	3
17:30:00	336	11	337	13	328	15	5	0	6	0	4	0	3	1	10	0	2	0	225	3
17:45:00	352	16	359	22	346	18	5	0	6	0	4	0	3	0	10	0	2	0	233	8
18:00:00	358	6	372	13	361	15	5	0	6	0	5	1	3	0	10	0	2	0	238	5
18:15:00	369	11	399	27	371	10	5	0	7	1	5	0	4	1	10	0	2	0	247	9
18:30:00	381	12	417	18	378	7	5	0	7	0	5	0	4	0	10	0	2	0	247	0
18:45:00	381	0	417	0	378	0	5	0	7	0	5	0	4	0	10	0	2	0	247	0
18:46:19	381	0	417	0	378	0	5	0	7	0	5	0	4	0	10	0	2	0	247	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300006**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	6	6	71	71	2	2	0	0	5	5	0	0	0	0	0	0	0	0	0	0
7:30:00	16	10	144	73	3	1	0	0	9	4	0	0	0	0	0	0	0	0	1	1
7:45:00	27	11	222	78	14	11	0	0	14	5	0	0	0	0	2	2	0	0	2	1
8:00:00	33	6	341	119	25	11	0	0	20	6	1	1	0	0	2	0	0	0	7	5
8:15:00	48	15	458	117	38	13	0	0	25	5	3	2	0	0	3	1	0	0	10	3
8:30:00	72	24	563	105	59	21	0	0	26	1	3	0	0	0	3	0	0	0	14	4
8:45:00	85	13	666	103	94	35	0	0	30	4	3	0	0	0	3	0	0	0	24	10
9:00:00	103	18	785	119	106	12	0	0	36	6	3	0	0	0	3	0	0	0	35	11
9:15:00	118	15	907	122	111	5	0	0	40	4	3	0	0	0	3	0	1	1	42	7
9:30:00	129	11	1032	125	118	7	1	1	46	6	3	0	0	0	3	0	1	0	47	5
9:45:00	147	18	1154	122	123	5	1	0	52	6	3	0	0	0	3	0	1	0	49	2
10:00:00	163	16	1269	115	129	6	1	0	59	7	3	0	0	0	3	0	1	0	53	4
10:00:32	163	0	1269	0	129	0	1	0	59	0	3	0	0	0	3	0	1	0	53	0
11:30:00	163	0	1269	0	129	0	1	0	59	0	3	0	0	0	3	0	1	0	53	0
11:45:00	178	15	1436	167	141	12	2	1	62	3	5	2	0	0	3	0	1	0	63	10
12:00:00	191	13	1589	153	147	6	3	1	66	4	5	0	0	0	3	0	1	0	68	5
12:15:00	211	20	1743	154	154	7	3	0	70	4	5	0	0	0	3	0	1	0	72	4
12:30:00	231	20	1905	162	161	7	3	0	73	3	5	0	0	0	3	0	1	0	81	9
12:45:00	240	9	2066	161	167	6	3	0	74	1	5	0	0	0	4	1	1	0	88	7
13:00:00	261	21	2226	160	172	5	3	0	77	3	5	0	0	0	4	0	1	0	98	10
13:15:00	276	15	2389	163	183	11	3	0	81	4	5	0	0	0	4	0	1	0	103	5
13:30:00	296	20	2559	170	193	10	3	0	83	2	5	0	0	0	5	1	1	0	110	7
13:30:31	296	0	2559	0	193	0	3	0	83	0	5	0	0	0	5	0	1	0	110	0
15:30:00	296	0	2559	0	193	0	3	0	83	0	5	0	0	0	5	0	1	0	110	0
15:45:00	310	14	2720	161	199	6	3	0	88	5	5	0	0	0	5	0	1	0	113	3
16:00:00	325	15	2887	167	208	9	3	0	90	2	5	0	0	0	5	0	1	0	115	2
16:15:00	342	17	3061	174	219	11	3	0	96	6	5	0	0	0	7	2	1	0	117	2
16:30:00	354	12	3250	189	230	11	3	0	99	3	5	0	0	0	7	0	1	0	123	6
16:45:00	369	15	3463	213	236	6	3	0	104	5	5	0	0	0	7	0	1	0	127	4
17:00:00	378	9	3700	237	250	14	3	0	108	4	5	0	0	0	8	1	1	0	130	3
17:15:00	395	17	3937	237	255	5	3	0	113	5	6	1	0	0	8	0	1	0	133	3
17:30:00	407	12	4135	198	265	10	3	0	117	4	6	0	0	0	11	3	1	0	140	7
17:45:00	418	11	4317	182	272	7	3	0	122	5	6	0	0	0	12	1	2	1	149	9
18:00:00	430	12	4492	175	280	8	3	0	126	4	6	0	0	0	12	0	2	0	152	3
18:15:00	446	16	4652	160	291	11	4	1	130	4	6	0	0	0	12	0	2	0	158	6
18:30:00	454	8	4823	171	303	12	4	0	134	4	6	0	0	0	12	0	2	0	158	0
18:45:00	454	0	4823	0	303	0	4	0	134	0	6	0	0	0	12	0	2	0	158	0
18:46:19	454	0	4823	0	303	0	4	0	134	0	6	0	0	0	12	0	2	0	158	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300006**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	7	7	4	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7:30:00	3	3	18	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0	11	9
7:45:00	12	9	37	19	10	5	0	0	0	0	0	0	0	0	0	0	0	0	17	6
8:00:00	20	8	58	21	18	8	0	0	0	0	0	0	1	1	0	0	0	0	29	12
8:15:00	32	12	73	15	25	7	0	0	0	0	0	0	1	0	0	0	0	0	34	5
8:30:00	38	6	86	13	39	14	0	0	1	1	0	0	1	0	2	2	0	0	43	9
8:45:00	47	9	109	23	50	11	0	0	1	0	0	0	1	0	4	2	0	0	50	7
9:00:00	64	17	137	28	59	9	0	0	3	2	0	0	1	0	5	1	0	0	64	14
9:15:00	77	13	146	9	67	8	0	0	3	0	0	0	1	0	5	0	0	0	71	7
9:30:00	83	6	156	10	78	11	1	1	3	0	2	2	1	0	6	1	0	0	87	16
9:45:00	90	7	161	5	89	11	2	1	3	0	4	2	1	0	6	0	0	0	95	8
10:00:00	95	5	166	5	99	10	2	0	3	0	4	0	1	0	9	3	0	0	105	10
10:00:32	95	0	166	0	99	0	2	0	3	0	4	0	1	0	9	0	0	0	105	0
11:30:00	95	0	166	0	99	0	2	0	3	0	4	0	1	0	9	0	0	0	105	0
11:45:00	104	9	173	7	111	12	2	0	3	0	4	0	1	0	9	0	0	0	120	15
12:00:00	111	7	183	10	120	9	4	2	3	0	4	0	1	0	10	1	0	0	129	9
12:15:00	117	6	189	6	126	6	4	0	3	0	4	0	1	0	10	0	0	0	137	8
12:30:00	126	9	195	6	133	7	4	0	3	0	4	0	1	0	10	0	0	0	147	10
12:45:00	130	4	198	3	143	10	4	0	3	0	4	0	1	0	10	0	0	0	163	16
13:00:00	139	9	207	9	150	7	4	0	3	0	6	2	1	0	10	0	0	0	185	22
13:15:00	149	10	216	9	158	8	4	0	3	0	6	0	1	0	10	0	0	0	194	9
13:30:00	156	7	230	14	166	8	4	0	3	0	6	0	1	0	11	1	0	0	202	8
13:30:31	156	0	230	0	166	0	4	0	3	0	6	0	1	0	11	0	0	0	202	0
15:30:00	156	0	230	0	166	0	4	0	3	0	6	0	1	0	11	0	0	0	202	0
15:45:00	167	11	237	7	178	12	4	0	3	0	6	0	1	0	12	1	0	0	206	4
16:00:00	173	6	247	10	190	12	4	0	3	0	6	0	1	0	12	0	0	0	224	18
16:15:00	185	12	255	8	200	10	4	0	3	0	6	0	1	0	12	0	0	0	232	8
16:30:00	193	8	263	8	207	7	4	0	3	0	6	0	1	0	13	1	0	0	248	16
16:45:00	200	7	277	14	217	10	4	0	3	0	6	0	1	0	13	0	0	0	256	8
17:00:00	202	2	285	8	226	9	4	0	3	0	6	0	1	0	13	0	0	0	260	4
17:15:00	208	6	295	10	235	9	4	0	3	0	6	0	1	0	13	0	0	0	270	10
17:30:00	215	7	309	14	241	6	4	0	3	0	6	0	1	0	13	0	0	0	287	17
17:45:00	220	5	317	8	249	8	4	0	3	0	6	0	1	0	13	0	2	2	304	17
18:00:00	223	3	327	10	254	5	4	0	3	0	6	0	1	0	13	0	2	0	311	7
18:15:00	227	4	338	11	262	8	4	0	3	0	6	0	1	0	15	2	2	0	317	6
18:30:00	230	3	349	11	268	6	4	0	3	0	6	0	1	0	15	0	2	0	317	0
18:45:00	230	0	349	0	268	0	4	0	3	0	6	0	1	0	15	0	2	0	317	0
18:46:19	230	0	349	0	268	0	4	0	3	0	6	0	1	0	15	0	2	0	317	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

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

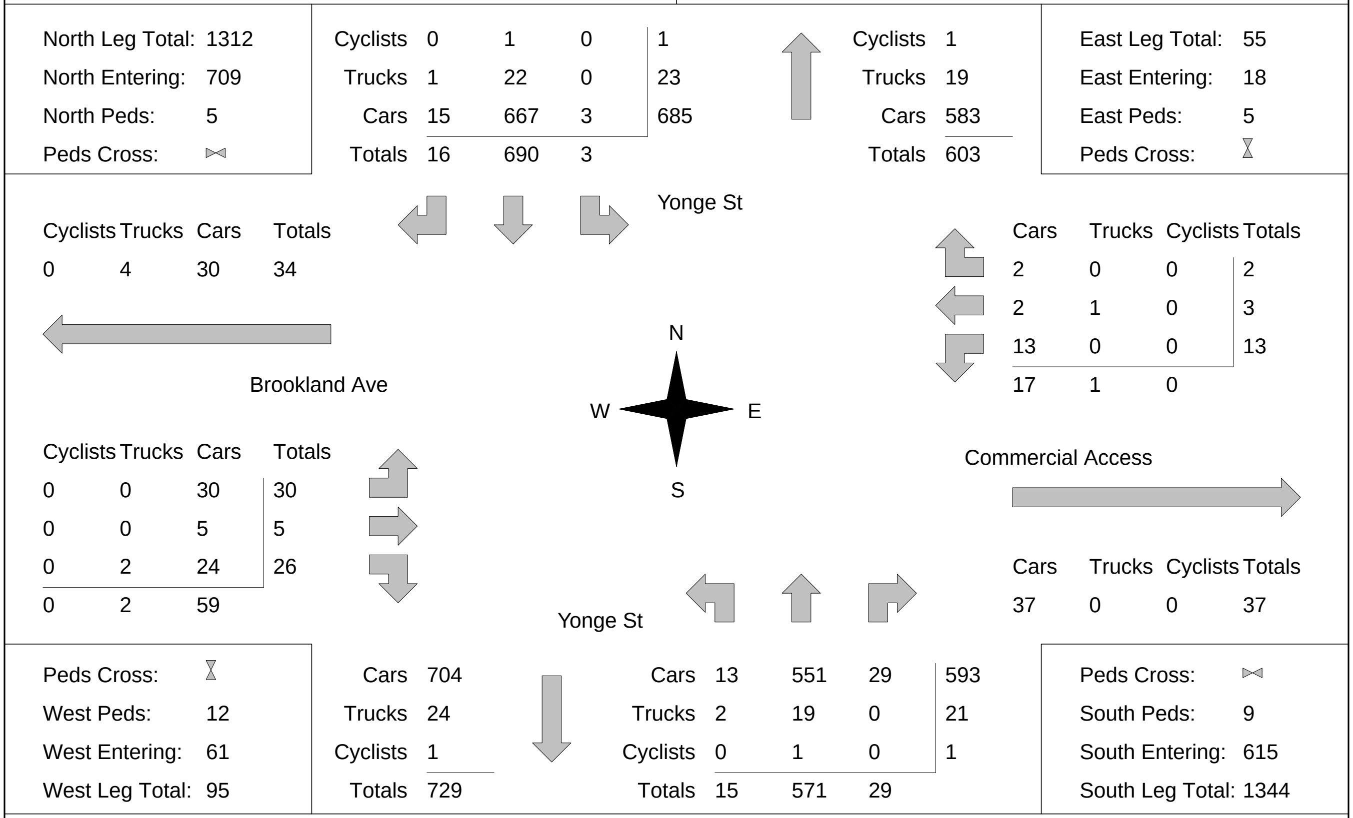
Municipality: Aurora
Site #: 1825300007
Intersection: Yonge St & Brookland Ave-Comme
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 1312
North Entering: 709
North Peds: 5
Peds Cross: ⋈

Cyclists	0	1	0	1
Trucks	1	22	0	23
Cars	15	667	3	685
Totals	16	690	3	

Cyclists	1
Trucks	19
Cars	583
Totals	603

East Leg Total: 55
East Entering: 18
East Peds: 5
Peds Cross: ⧗

Cyclists	Trucks	Cars	Totals
0	4	30	34

Cars	Trucks	Cyclists	Totals
2	0	0	2
2	1	0	3
13	0	0	13
17	1	0	

Cyclists	Trucks	Cars	Totals
0	0	30	30
0	0	5	5
0	2	24	26
0	2	59	

Cars	Trucks	Cyclists	Totals
37	0	0	37

Peds Cross: ⧗
West Peds: 12
West Entering: 61
West Leg Total: 95

Cars	704
Trucks	24
Cyclists	1
Totals	729

Cars	13	551	29	593
Trucks	2	19	0	21
Cyclists	0	1	0	1
Totals	15	571	29	

Peds Cross: ⋈
South Peds: 9
South Entering: 615
South Leg Total: 1344

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:15:00
To: 13:15:00

Municipality: Aurora
Site #: 1825300007
Intersection: Yonge St & Brookland Ave-Comme
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1524
North Entering: 753
North Peds: 1
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	2	20	0	22
Cars	45	680	6	731
Totals	47	700	6	

Cyclists	0
Trucks	11
Cars	760
Totals	771

East Leg Total: 113
East Entering: 56
East Peds: 18
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	2	89	91

Brookland Ave

Cars	Trucks	Cyclists	Totals
18	0	0	18
5	0	0	5
33	0	0	33
56	0	0	

N
W E
S

Cyclists	Trucks	Cars	Totals
0	0	48	48
0	0	4	4
0	1	46	47
0	1	98	

Commercial Access

Cars	Trucks	Cyclists	Totals
57	0	0	57

Yonge St

Peds Cross: ⧗
West Peds: 23
West Entering: 99
West Leg Total: 190

Cars	759
Trucks	21
Cyclists	0
Totals	780

Cars	39	694	47	780
Trucks	0	11	0	11
Cyclists	0	0	0	0
Totals	39	705	47	

Peds Cross: ⋈
South Peds: 8
South Entering: 791
South Leg Total: 1571

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Aurora
Site #: 1825300007
Intersection: Yonge St & Brookland Ave-Comme
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

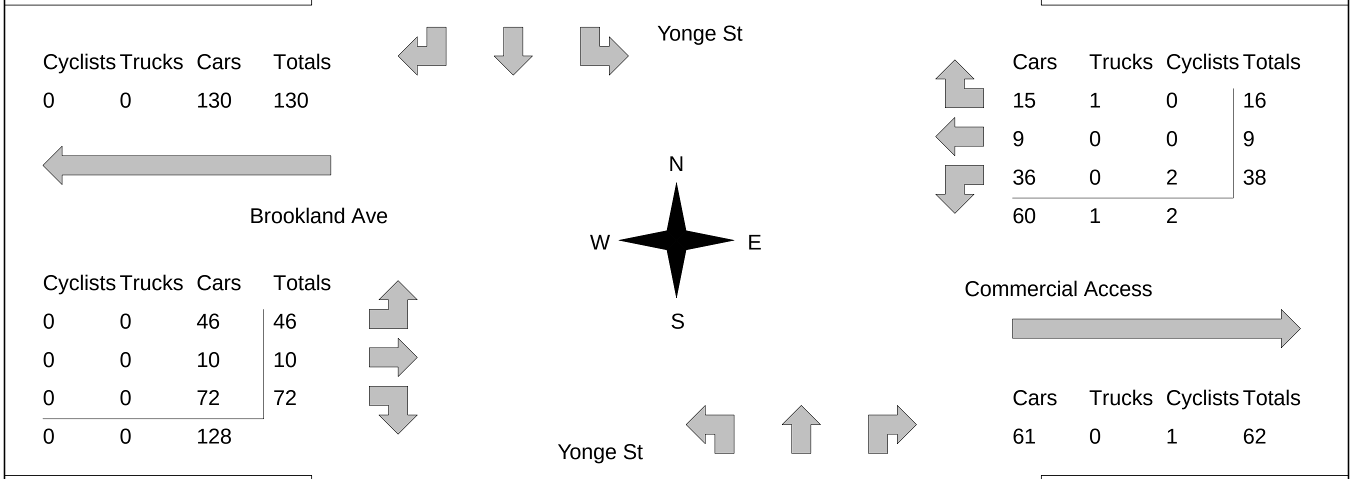
Major Road: Yonge St runs N/S

North Leg Total: 1738
North Entering: 739
North Peds: 4
Peds Cross: ⋈

Cyclists	0	2	0	2
Trucks	0	20	0	20
Cars	60	651	6	717
Totals	60	673	6	

Cyclists	4
Trucks	18
Cars	977
Totals	999

East Leg Total: 125
East Entering: 63
East Peds: 10
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
0	0	130	130

Cars	Trucks	Cyclists	Totals
15	1	0	16
9	0	0	9
36	0	2	38
60	1	2	

Cyclists	Trucks	Cars	Totals
0	0	46	46
0	0	10	10
0	0	72	72
0	0	128	

Cars	Trucks	Cyclists	Totals
61	0	1	62

Peds Cross: ⧗
West Peds: 53
West Entering: 128
West Leg Total: 258

Cars	759
Trucks	20
Cyclists	4
Totals	783

Cars	61	916	45	1022
Trucks	0	17	0	17
Cyclists	0	4	1	5
Totals	61	937	46	

Peds Cross: ⋈
South Peds: 14
South Entering: 1044
South Leg Total: 1827

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Aurora
Site #: 1825300007
Intersection: Yonge St & Brookland Ave-Comme
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 11278
North Entering: 5528
North Peds: 22
Peds Cross: ⋈

Cyclists	2	10	1	13
Trucks	6	156	0	162
Cars	296	5011	46	5353
Totals	304	5177	47	

Cyclists	11
Trucks	142
Cars	5597
Totals	5750

East Leg Total: 708
East Entering: 313
East Peds: 73
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
3	9	614	626

Cars	Trucks	Cyclists	Totals
72	1	0	73
42	1	0	43
193	2	2	197
307	4	2	

Brookland Ave

N

W E

S

Cyclists	Trucks	Cars	Totals
3	2	295	300
0	0	41	41
1	8	302	311
4	10	638	

Commercial Access

Cars	Trucks	Cyclists	Totals
392	1	2	395

Yonge St

Peds Cross: ⧗
West Peds: 233
West Entering: 652
West Leg Total: 1278

Cars	5506
Trucks	166
Cyclists	13
Totals	5685

Cars	276	5230	305	5811
Trucks	2	139	1	142
Cyclists	1	8	1	10
Totals	279	5377	307	

Peds Cross: ⋈
South Peds: 63
South Entering: 5963
South Leg Total: 11648

Comments

Ontario Traffic Inc.
Traffic Count Summary

Intersection: Yonge St & Brookland Ave-Comme **Count Date:** 27-Jun-18 **Municipality:** Aurora

North Approach Totals								South Approach Totals				
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	603	13	616	0	1025	8:00:00	9	391	9	409	1
9:00:00	3	690	16	709	5	1324	9:00:00	15	571	29	615	9
10:00:00	6	595	18	619	2	1214	10:00:00	15	553	27	595	9
12:00:00	1	308	25	334	3	739	12:00:00	19	368	18	405	1
13:00:00	6	694	45	745	1	1527	13:00:00	43	692	47	782	8
16:00:00	7	668	42	717	3	1509	16:00:00	43	700	49	792	7
17:00:00	5	664	65	734	4	1698	17:00:00	53	876	35	964	12
18:00:00	7	643	55	705	3	1673	18:00:00	58	856	54	968	13
Totals:	35	4865	279	5179	21	10709		255	5007	268	5530	60

East Approach Totals								West Approach Totals				
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	4	0	3	7	3	44	8:00:00	27	1	9	37	8
9:00:00	13	3	2	18	5	79	9:00:00	30	5	26	61	12
10:00:00	18	4	7	29	10	81	10:00:00	22	5	25	52	26
12:00:00	14	2	2	18	3	62	12:00:00	20	3	21	44	19
13:00:00	35	3	21	59	18	159	13:00:00	49	3	48	100	31
16:00:00	31	7	13	51	10	144	16:00:00	50	4	39	93	29
17:00:00	25	10	9	44	12	146	17:00:00	40	5	57	102	42
18:00:00	45	10	14	69	9	193	18:00:00	43	13	68	124	50
Totals:	185	39	71	295	70	908		281	39	293	613	217

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	33	62	56	41	96	98	91	117

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300007**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	129	129	4	4	0	0	5	5	0	0	0	0	0	0	1	1	0	0
7:30:00	0	0	253	124	7	3	0	0	11	6	0	0	0	0	0	0	1	0	0	0
7:45:00	0	0	438	185	9	2	0	0	13	2	0	0	0	0	0	0	1	0	0	0
8:00:00	0	0	583	145	12	3	0	0	20	7	0	0	0	0	0	0	1	0	0	0
8:15:00	2	2	762	179	14	2	0	0	26	6	0	0	0	0	0	0	1	0	4	4
8:30:00	2	0	944	182	16	2	0	0	31	5	1	1	0	0	1	1	1	0	4	0
8:45:00	3	1	1107	163	23	7	0	0	37	6	1	0	0	0	1	0	1	0	4	0
9:00:00	3	0	1250	143	27	4	0	0	42	5	1	0	0	0	1	0	1	0	5	1
9:15:00	4	1	1415	165	34	7	0	0	48	6	1	0	0	0	1	0	1	0	6	1
9:30:00	4	0	1550	135	37	3	0	0	54	6	2	1	0	0	1	0	1	0	6	0
9:45:00	5	1	1686	136	44	7	0	0	61	7	2	0	0	0	1	0	1	0	6	0
10:00:00	9	4	1818	132	44	0	0	0	68	7	2	0	0	0	2	1	1	0	7	1
10:01:05	9	0	1818	0	44	0	0	0	68	0	2	0	0	0	2	0	1	0	7	0
11:30:00	9	0	1818	0	44	0	0	0	68	0	2	0	0	0	2	0	1	0	7	0
11:45:00	9	0	1970	152	50	6	0	0	71	3	2	0	0	0	3	1	1	0	8	1
12:00:00	10	1	2118	148	69	19	0	0	75	4	2	0	0	0	3	0	1	0	10	2
12:15:00	11	1	2287	169	80	11	0	0	80	5	4	2	1	1	3	0	1	0	10	0
12:30:00	13	2	2453	166	91	11	0	0	83	3	5	1	1	0	3	0	1	0	10	0
12:45:00	15	2	2616	163	100	9	0	0	87	4	6	1	1	0	3	0	1	0	11	1
13:00:00	15	0	2792	176	110	10	0	0	95	8	6	0	1	0	3	0	1	0	11	0
13:15:00	17	2	2967	175	125	15	0	0	100	5	6	0	1	0	3	0	1	0	11	0
13:30:00	20	3	3131	164	135	10	0	0	103	3	6	0	1	0	4	1	1	0	12	1
13:31:42	20	0	3131	0	135	0	0	0	103	0	6	0	1	0	4	0	1	0	12	0
15:30:00	20	0	3131	0	135	0	0	0	103	0	6	0	1	0	4	0	1	0	12	0
15:45:00	22	2	3294	163	141	6	0	0	109	6	6	0	1	0	4	0	1	0	13	1
16:00:00	22	0	3438	144	152	11	0	0	116	7	6	0	1	0	4	0	1	0	14	1
16:15:00	23	1	3597	159	174	22	0	0	119	3	6	0	1	0	5	1	1	0	14	0
16:30:00	26	3	3756	159	190	16	0	0	122	3	6	0	1	0	6	1	1	0	15	1
16:45:00	27	1	3916	160	200	10	0	0	128	6	6	0	1	0	7	1	1	0	15	0
17:00:00	27	0	4084	168	217	17	0	0	131	3	6	0	1	0	7	0	1	0	18	3
17:15:00	29	2	4255	171	232	15	0	0	137	6	6	0	1	0	8	1	1	0	19	1
17:30:00	32	3	4407	152	250	18	0	0	142	5	6	0	1	0	8	0	1	0	19	0
17:45:00	34	2	4569	162	263	13	0	0	144	2	6	0	1	0	10	2	1	0	19	0
18:00:00	34	0	4708	139	272	9	0	0	147	3	6	0	1	0	10	0	1	0	21	2
18:15:00	38	4	4885	177	283	11	0	0	151	4	6	0	1	0	10	0	1	0	22	1
18:30:00	46	8	5011	126	296	13	0	0	156	5	6	0	1	0	10	0	2	1	22	0
18:45:00	46	0	5011	0	296	0	0	0	156	0	6	0	1	0	10	0	2	0	22	0
18:47:01	46	0	5011	0	296	0	0	0	156	0	6	0	1	0	10	0	2	0	22	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300007

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
7:30:00	2	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1
7:45:00	3	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8:00:00	4	1	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8:15:00	8	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3
8:30:00	10	2	1	1	3	0	0	0	1	1	0	0	0	0	0	0	0	0	7	1
8:45:00	11	1	1	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0
9:00:00	17	6	2	1	5	2	0	0	1	0	0	0	0	0	0	0	0	0	8	1
9:15:00	20	3	3	1	9	4	0	0	1	0	0	0	0	0	0	0	0	0	11	3
9:30:00	28	8	3	0	10	1	0	0	1	0	0	0	0	0	0	0	0	0	13	2
9:45:00	32	4	4	1	11	1	0	0	1	0	0	0	0	0	0	0	0	0	16	3
10:00:00	35	3	6	2	12	1	0	0	1	0	0	0	0	0	0	0	0	0	18	2
10:01:05	35	0	6	0	12	0	0	0	1	0	0	0	0	0	0	0	0	0	18	0
11:30:00	35	0	6	0	12	0	0	0	1	0	0	0	0	0	0	0	0	0	18	0
11:45:00	45	10	7	1	14	2	1	1	1	0	0	0	0	0	0	0	0	0	20	2
12:00:00	48	3	8	1	14	0	1	0	1	0	0	0	0	0	0	0	0	0	21	1
12:15:00	58	10	8	0	19	5	1	0	1	0	0	0	0	0	0	0	0	0	26	5
12:30:00	63	5	10	2	25	6	1	0	1	0	0	0	0	0	0	0	0	0	28	2
12:45:00	74	11	10	0	29	4	1	0	1	0	0	0	0	0	0	0	0	0	33	5
13:00:00	83	9	11	1	35	6	1	0	1	0	0	0	0	0	0	0	0	0	39	6
13:15:00	91	8	13	2	37	2	1	0	1	0	0	0	0	0	0	0	0	0	44	5
13:30:00	102	11	15	2	42	5	1	0	1	0	0	0	0	0	0	0	0	0	46	2
13:31:42	102	0	15	0	42	0	1	0	1	0	0	0	0	0	0	0	0	0	46	0
15:30:00	102	0	15	0	42	0	1	0	1	0	0	0	0	0	0	0	0	0	46	0
15:45:00	108	6	15	0	44	2	1	0	1	0	0	0	0	0	0	0	0	0	47	1
16:00:00	114	6	18	3	48	4	1	0	1	0	0	0	0	0	0	0	0	0	49	2
16:15:00	121	7	20	2	50	2	1	0	1	0	0	0	0	0	0	0	0	0	51	2
16:30:00	125	4	24	4	52	2	1	0	1	0	0	0	0	0	0	0	0	0	55	4
16:45:00	130	5	26	2	52	0	1	0	1	0	0	0	0	0	0	0	0	0	60	5
17:00:00	137	7	28	2	57	5	1	0	1	0	0	0	2	2	0	0	0	0	61	1
17:15:00	150	13	32	4	63	6	1	0	1	0	1	1	2	0	0	0	0	0	63	2
17:30:00	161	11	33	1	67	4	1	0	1	0	1	0	2	0	0	0	0	0	65	2
17:45:00	171	10	36	3	69	2	1	0	1	0	1	0	2	0	0	0	0	0	67	2
18:00:00	182	11	38	2	70	1	1	0	1	0	1	0	2	0	0	0	0	0	70	3
18:15:00	187	5	40	2	70	0	2	1	1	0	1	0	2	0	0	0	0	0	72	2
18:30:00	193	6	42	2	72	2	2	0	1	0	1	0	2	0	0	0	0	0	73	1
18:45:00	193	0	42	0	72	0	2	0	1	0	1	0	2	0	0	0	0	0	73	0
18:47:01	193	0	42	0	72	0	2	0	1	0	1	0	2	0	0	0	0	0	73	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300007

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	67	67	4	4	0	0	4	4	0	0	1	1	0	0	0	0	0	0
7:30:00	1	1	148	81	5	1	0	0	8	4	0	0	1	0	0	0	0	0	1	1
7:45:00	4	3	239	91	6	1	0	0	12	4	0	0	1	0	1	1	0	0	1	0
8:00:00	8	4	371	132	9	3	0	0	19	7	0	0	1	0	1	0	0	0	1	0
8:15:00	11	3	505	134	14	5	1	1	27	8	0	0	1	0	2	1	0	0	5	4
8:30:00	12	1	643	138	20	6	2	1	28	1	0	0	1	0	2	0	0	0	7	2
8:45:00	16	4	784	141	26	6	2	0	32	4	0	0	1	0	2	0	0	0	10	3
9:00:00	21	5	922	138	38	12	2	0	38	6	0	0	1	0	2	0	0	0	10	0
9:15:00	23	2	1058	136	48	10	2	0	42	4	0	0	1	0	2	0	0	0	15	5
9:30:00	25	2	1189	131	57	9	2	0	47	5	0	0	1	0	2	0	0	0	16	1
9:45:00	27	2	1325	136	59	2	2	0	53	6	0	0	1	0	2	0	0	0	17	1
10:00:00	36	9	1453	128	65	6	2	0	60	7	0	0	1	0	2	0	0	0	19	2
10:01:05	36	0	1453	0	65	0	2	0	60	0	0	0	1	0	2	0	0	0	19	0
11:30:00	36	0	1453	0	65	0	2	0	60	0	0	0	1	0	2	0	0	0	19	0
11:45:00	46	10	1641	188	69	4	2	0	66	6	0	0	1	0	2	0	0	0	20	1
12:00:00	55	9	1811	170	83	14	2	0	70	4	0	0	1	0	2	0	0	0	20	0
12:15:00	67	12	1980	169	97	14	2	0	74	4	0	0	1	0	2	0	0	0	21	1
12:30:00	77	10	2167	187	105	8	2	0	77	3	0	0	1	0	2	0	0	0	23	2
12:45:00	87	10	2324	157	122	17	2	0	78	1	0	0	1	0	2	0	0	0	26	3
13:00:00	98	11	2492	168	130	8	2	0	81	3	0	0	1	0	2	0	0	0	28	2
13:15:00	106	8	2674	182	144	14	2	0	85	4	0	0	1	0	2	0	0	0	29	1
13:30:00	122	16	2843	169	160	16	2	0	87	2	1	1	1	0	2	0	0	0	30	1
13:31:42	122	0	2843	0	160	0	2	0	87	0	1	0	1	0	2	0	0	0	30	0
15:30:00	122	0	2843	0	160	0	2	0	87	0	1	0	1	0	2	0	0	0	30	0
15:45:00	134	12	3008	165	169	9	2	0	92	5	1	0	1	0	2	0	0	0	34	4
16:00:00	141	7	3179	171	178	9	2	0	94	2	1	0	1	0	2	0	0	0	35	1
16:15:00	152	11	3375	196	189	11	2	0	101	7	1	0	1	0	3	1	0	0	38	3
16:30:00	161	9	3565	190	198	9	2	0	104	3	1	0	1	0	3	0	0	0	38	0
16:45:00	177	16	3791	226	202	4	2	0	109	5	1	0	1	0	3	0	0	0	44	6
17:00:00	194	17	4034	243	213	11	2	0	113	4	1	0	1	0	4	1	0	0	47	3
17:15:00	209	15	4274	240	225	12	2	0	117	4	1	0	1	0	4	0	0	0	50	3
17:30:00	222	13	4481	207	243	18	2	0	121	4	1	0	1	0	7	3	1	1	52	2
17:45:00	237	15	4676	195	255	12	2	0	126	5	1	0	1	0	7	0	1	0	58	6
18:00:00	252	15	4869	193	266	11	2	0	131	5	1	0	1	0	7	0	1	0	60	2
18:15:00	261	9	5050	181	287	21	2	0	135	4	1	0	1	0	8	1	1	0	62	2
18:30:00	276	15	5230	180	305	18	2	0	139	4	1	0	1	0	8	0	1	0	63	1
18:45:00	276	0	5230	0	305	0	2	0	139	0	1	0	1	0	8	0	1	0	63	0
18:47:01	276	0	5230	0	305	0	2	0	139	0	1	0	1	0	8	0	1	0	63	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300007

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	7	7	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7:30:00	13	6	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	2	2
7:45:00	20	7	1	1	6	4	0	0	0	0	0	0	2	1	0	0	0	0	4	2
8:00:00	25	5	1	0	9	3	0	0	0	0	0	0	2	0	0	0	0	0	8	4
8:15:00	34	9	2	1	13	4	0	0	0	0	0	0	2	0	0	0	0	0	13	5
8:30:00	43	9	3	1	19	6	0	0	0	0	1	1	2	0	0	0	0	0	15	2
8:45:00	50	7	5	2	29	10	0	0	0	0	2	1	2	0	0	0	0	0	18	3
9:00:00	55	5	6	1	33	4	0	0	0	0	2	0	2	0	0	0	0	0	20	2
9:15:00	58	3	7	1	41	8	0	0	0	0	2	0	3	1	0	0	0	0	23	3
9:30:00	62	4	9	2	44	3	1	1	0	0	4	2	3	0	0	0	0	0	28	5
9:45:00	70	8	10	1	50	6	1	0	0	0	4	0	3	0	0	0	0	0	36	8
10:00:00	75	5	11	1	56	6	1	0	0	0	4	0	3	0	0	0	0	0	46	10
10:01:05	75	0	11	0	56	0	1	0	0	0	4	0	3	0	0	0	0	0	46	0
11:30:00	75	0	11	0	56	0	1	0	0	0	4	0	3	0	0	0	0	0	46	0
11:45:00	83	8	13	2	65	9	1	0	0	0	5	1	3	0	0	0	0	0	58	12
12:00:00	94	11	14	1	75	10	2	1	0	0	6	1	3	0	0	0	0	0	65	7
12:15:00	106	12	14	0	86	11	2	0	0	0	6	0	3	0	0	0	0	0	78	13
12:30:00	116	10	14	0	103	17	2	0	0	0	6	0	3	0	0	0	0	0	87	9
12:45:00	130	14	15	1	112	9	2	0	0	0	7	1	3	0	0	0	0	0	93	6
13:00:00	143	13	17	2	122	10	2	0	0	0	7	0	3	0	0	0	0	0	96	3
13:15:00	154	11	18	1	132	10	2	0	0	0	7	0	3	0	0	0	0	0	101	5
13:30:00	172	18	19	1	140	8	2	0	0	0	7	0	3	0	0	0	0	0	106	5
13:31:42	172	0	19	0	140	0	2	0	0	0	7	0	3	0	0	0	0	0	106	0
15:30:00	172	0	19	0	140	0	2	0	0	0	7	0	3	0	0	0	0	0	106	0
15:45:00	177	5	19	0	150	10	2	0	0	0	7	0	3	0	0	0	1	1	116	10
16:00:00	193	16	21	2	160	10	2	0	0	0	7	0	3	0	0	0	1	0	125	9
16:15:00	200	7	21	0	175	15	2	0	0	0	8	1	3	0	0	0	1	0	131	6
16:30:00	211	11	23	2	188	13	2	0	0	0	8	0	3	0	0	0	1	0	144	13
16:45:00	223	12	24	1	203	15	2	0	0	0	8	0	3	0	0	0	1	0	157	13
17:00:00	233	10	26	2	216	13	2	0	0	0	8	0	3	0	0	0	1	0	167	10
17:15:00	246	13	29	3	239	23	2	0	0	0	8	0	3	0	0	0	1	0	182	15
17:30:00	257	11	33	4	260	21	2	0	0	0	8	0	3	0	0	0	1	0	197	15
17:45:00	267	10	34	1	270	10	2	0	0	0	8	0	3	0	0	0	1	0	204	7
18:00:00	276	9	39	5	284	14	2	0	0	0	8	0	3	0	0	0	1	0	217	13
18:15:00	286	10	40	1	293	9	2	0	0	0	8	0	3	0	0	0	1	0	225	8
18:30:00	295	9	41	1	302	9	2	0	0	0	8	0	3	0	0	0	1	0	233	8
18:45:00	295	0	41	0	302	0	2	0	0	0	8	0	3	0	0	0	1	0	233	0
18:47:01	295	0	41	0	302	0	2	0	0	0	8	0	3	0	0	0	1	0	233	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:15:00
To: 9:15:00

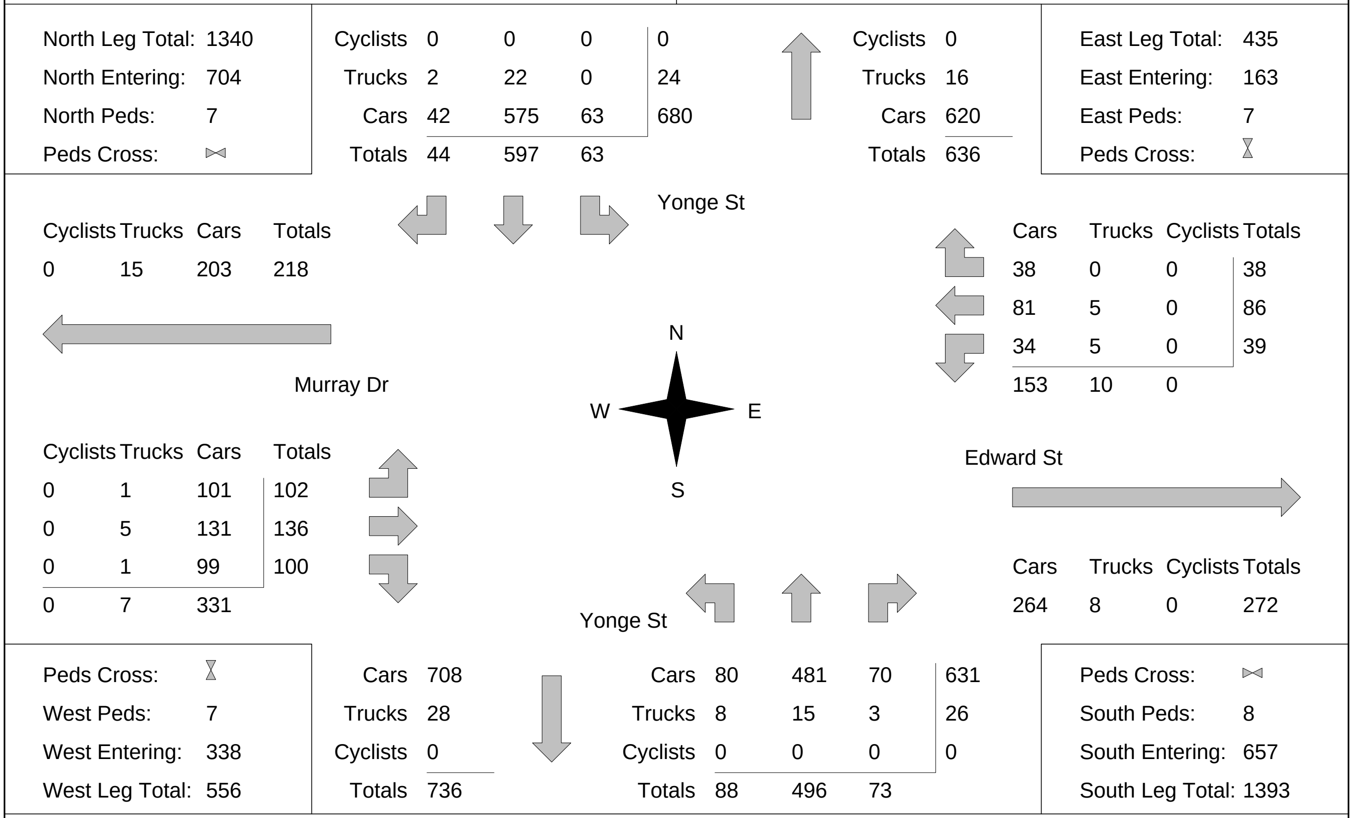
Municipality: Aurora
Site #: 1825300008
Intersection: Yonge St & Murray Dr-Edward St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S



North Leg Total: 1340
North Entering: 704
North Peds: 7
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	2	22	0	24
Cars	42	575	63	680
Totals	44	597	63	

Cyclists	0
Trucks	16
Cars	620
Totals	636

East Leg Total: 435
East Entering: 163
East Peds: 7
Peds Cross: ⧖

Cyclists	Trucks	Cars	Totals
0	15	203	218

Cars	Trucks	Cyclists	Totals
38	0	0	38
81	5	0	86
34	5	0	39
153	10	0	

Cyclists	Trucks	Cars	Totals
0	1	101	102
0	5	131	136
0	1	99	100
0	7	331	

Cars	Trucks	Cyclists	Totals
264	8	0	272

Peds Cross: ⧖
West Peds: 7
West Entering: 338
West Leg Total: 556

Cars	708
Trucks	28
Cyclists	0
Totals	736

Cars	80	481	70	631
Trucks	8	15	3	26
Cyclists	0	0	0	0
Totals	88	496	73	

Peds Cross: ⋈
South Peds: 8
South Entering: 657
South Leg Total: 1393

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:00:00
To: 13:00:00

Municipality: Aurora
Site #: 1825300008
Intersection: Yonge St & Murray Dr-Edward St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

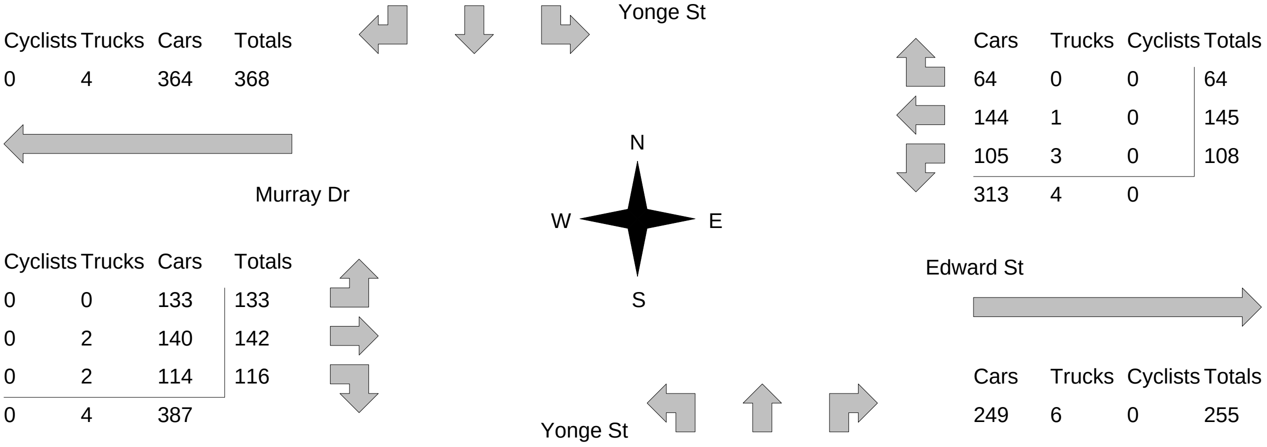
Major Road: Yonge St runs N/S

North Leg Total: 1542
North Entering: 762
North Peds: 8
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	0	17	4	21
Cars	106	565	70	741
Totals	106	582	74	

Cyclists	0
Trucks	11
Cars	769
Totals	780

East Leg Total: 572
East Entering: 317
East Peds: 9
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
0	4	364	368

Cars	Trucks	Cyclists	Totals
64	0	0	64
144	1	0	145
105	3	0	108
313	4	0	

Cyclists	Trucks	Cars	Totals
0	0	133	133
0	2	140	142
0	2	114	116
0	4	387	

Cars	Trucks	Cyclists	Totals
249	6	0	255

Peds Cross: ⧗
West Peds: 12
West Entering: 391
West Leg Total: 759

Cars	784
Trucks	22
Cyclists	0
Totals	806

Cars	114	572	39	725
Trucks	3	11	0	14
Cyclists	0	0	0	0
Totals	117	583	39	

Peds Cross: ⋈
South Peds: 8
South Entering: 739
South Leg Total: 1545

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Aurora
Site #: 1825300008
Intersection: Yonge St & Murray Dr-Edward St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

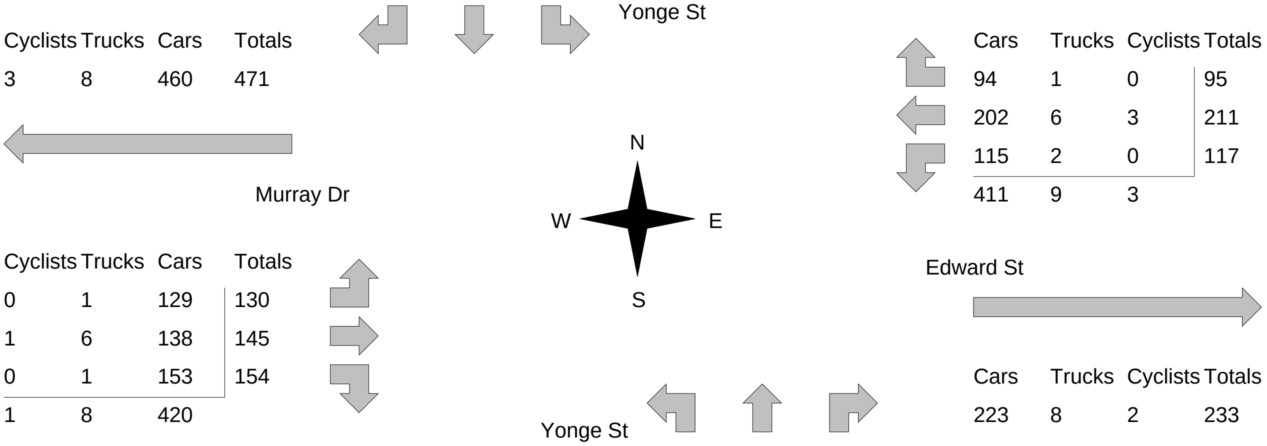
Major Road: Yonge St runs N/S

North Leg Total: 1791
North Entering: 763
North Peds: 13
Peds Cross: ⋈

Cyclists	0	0	1	1
Trucks	2	16	2	20
Cars	86	619	37	742
Totals	88	635	40	

Cyclists	0
Trucks	17
Cars	1011
Totals	1028

East Leg Total: 656
East Entering: 423
East Peds: 5
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
3	8	460	471

Cars	Trucks	Cyclists	Totals
94	1	0	95
202	6	3	211
115	2	0	117
411	9	3	

Cyclists	Trucks	Cars	Totals
0	1	129	130
1	6	138	145
0	1	153	154
1	8	420	

Cars	Trucks	Cyclists	Totals
223	8	2	233

Peds Cross: ⧗
West Peds: 12
West Entering: 429
West Leg Total: 900

Cars	887
Trucks	19
Cyclists	0
Totals	906

Cars	172	788	48	1008
Trucks	0	15	0	15
Cyclists	0	0	0	0
Totals	172	803	48	

Peds Cross: ⋈
South Peds: 4
South Entering: 1023
South Leg Total: 1929

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Aurora
Site #: 1825300008
Intersection: Yonge St & Murray Dr-Edward St
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

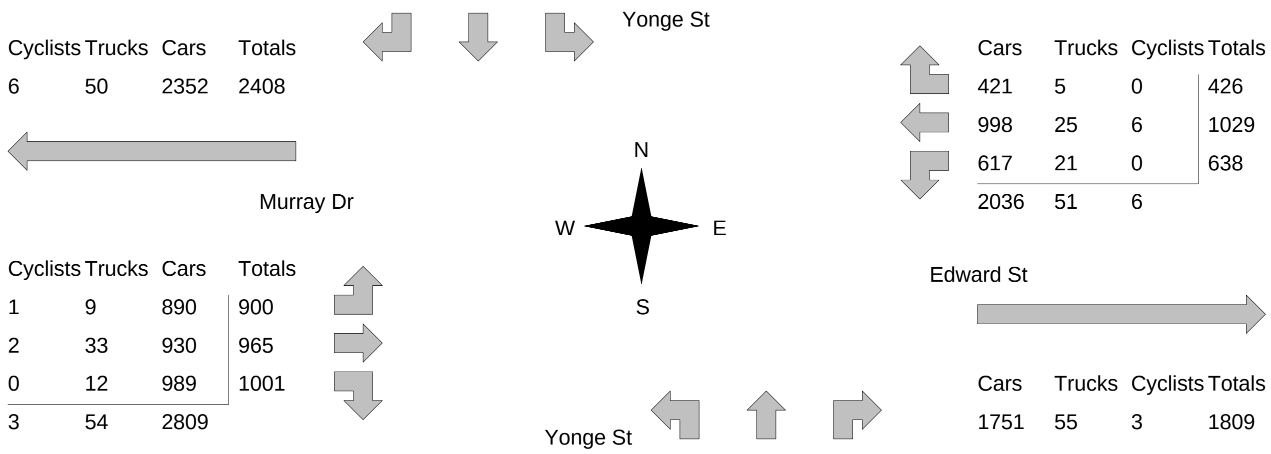
Major Road: Yonge St runs N/S

North Leg Total: 11414
North Entering: 5498
North Peds: 56
Peds Cross: ⋈

Cyclists	0	0	1	1
Trucks	7	145	12	164
Cars	507	4407	419	5333
Totals	514	4552	432	

Cyclists	4
Trucks	142
Cars	5770
Totals	5916

East Leg Total: 3902
East Entering: 2093
East Peds: 55
Peds Cross: ⧗



Cyclists	Trucks	Cars	Totals
6	50	2352	2408

Cars	Trucks	Cyclists	Totals
421	5	0	426
998	25	6	1029
617	21	0	638
2036	51	6	

Cyclists	Trucks	Cars	Totals
1	9	890	900
2	33	930	965
0	12	989	1001
3	54	2809	

Cars	Trucks	Cyclists	Totals
1751	55	3	1809

Peds Cross: ⧗
West Peds: 88
West Entering: 2866
West Leg Total: 5274

Cars	6013
Trucks	178
Cyclists	0
Totals	6191

Cars	847	4459	402	5708
Trucks	18	128	10	156
Cyclists	0	3	0	3
Totals	865	4590	412	

Peds Cross: ⋈
South Peds: 40
South Entering: 5867
South Leg Total: 12058

Comments

Ontario Traffic Inc.

Traffic Count Summary

Intersection: Yonge St & Murray Dr-Edward St | **Count Date:** 27-Jun-18 | **Municipality:** Aurora

North Approach Totals							South Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	46	523	16	585	2	996	8:00:00	31	315	65	411	2
9:00:00	64	607	40	711	7	1342	9:00:00	68	496	67	631	4
10:00:00	40	519	53	612	5	1230	10:00:00	87	474	57	618	6
12:00:00	24	265	39	328	4	691	12:00:00	46	289	28	363	5
13:00:00	74	582	106	762	8	1501	13:00:00	117	583	39	739	8
16:00:00	71	562	71	704	7	1496	16:00:00	126	616	50	792	4
17:00:00	48	599	75	722	5	1668	17:00:00	172	727	47	946	5
18:00:00	42	620	77	739	14	1680	18:00:00	158	746	37	941	3
Totals:	409	4277	477	5163	52	10604		805	4246	390	5441	37

East Approach Totals							West Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	58	34	24	116	3	363	8:00:00	60	74	113	247	3
9:00:00	34	77	33	144	8	461	9:00:00	96	118	103	317	4
10:00:00	51	78	29	158	7	456	10:00:00	88	117	93	298	15
12:00:00	51	65	31	147	7	335	12:00:00	69	57	62	188	11
13:00:00	108	145	64	317	9	708	13:00:00	133	142	116	391	12
16:00:00	70	153	51	274	9	691	16:00:00	133	137	147	417	12
17:00:00	114	174	96	384	5	776	17:00:00	119	133	140	392	13
18:00:00	100	214	79	393	3	825	18:00:00	136	135	161	432	12
Totals:	586	940	407	1933	51	4615		834	913	935	2682	82

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	196	259	267	194	402	367	417	467

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300008

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	8	8	113	113	4	4	0	0	5	5	0	0	0	0	0	0	0	0	0	0
7:30:00	18	10	225	112	9	5	0	0	11	6	0	0	0	0	0	0	0	0	0	0
7:45:00	31	13	384	159	12	3	0	0	13	2	0	0	0	0	0	0	0	0	1	1
8:00:00	46	15	503	119	16	4	0	0	20	7	0	0	0	0	0	0	0	0	2	1
8:15:00	60	14	664	161	25	9	1	1	25	5	0	0	0	0	0	0	0	0	3	1
8:30:00	85	25	817	153	35	10	1	0	31	6	0	0	0	0	0	0	0	0	5	2
8:45:00	95	10	968	151	43	8	1	0	36	5	2	2	0	0	0	0	0	0	9	4
9:00:00	109	14	1089	121	54	11	1	0	41	5	2	0	0	0	0	0	0	0	9	0
9:15:00	123	14	1239	150	67	13	1	0	47	6	2	0	0	0	0	0	0	0	10	1
9:30:00	131	8	1351	112	80	13	2	1	54	7	2	0	0	0	0	0	0	0	13	3
9:45:00	136	5	1471	120	91	11	3	1	59	5	3	1	0	0	0	0	0	0	13	0
10:00:00	146	10	1585	114	105	14	4	1	64	5	4	1	0	0	0	0	0	0	14	1
10:02:14	146	0	1585	0	105	0	4	0	64	0	4	0	0	0	0	0	0	0	14	0
11:30:00	146	0	1585	0	105	0	4	0	64	0	4	0	0	0	0	0	0	0	14	0
11:45:00	159	13	1713	128	123	18	4	0	69	5	4	0	0	0	0	0	0	0	15	1
12:00:00	170	11	1840	127	144	21	4	0	74	5	4	0	0	0	0	0	0	0	18	3
12:15:00	186	16	1995	155	168	24	8	4	76	2	4	0	0	0	0	0	0	0	19	1
12:30:00	205	19	2130	135	192	24	8	0	79	3	4	0	0	0	0	0	0	0	20	1
12:45:00	219	14	2271	141	216	24	8	0	83	4	4	0	0	0	0	0	0	0	21	1
13:00:00	240	21	2405	134	250	34	8	0	91	8	4	0	0	0	0	0	0	0	26	5
13:15:00	258	18	2552	147	271	21	8	0	96	5	4	0	0	0	0	0	0	0	28	2
13:30:00	284	26	2682	130	293	22	8	0	99	3	4	0	0	0	0	0	0	0	31	3
13:30:50	284	0	2682	0	293	0	8	0	99	0	4	0	0	0	0	0	0	0	31	0
15:30:00	284	0	2682	0	293	0	8	0	99	0	4	0	0	0	0	0	0	0	31	0
15:45:00	292	8	2825	143	307	14	9	1	104	5	4	0	0	0	0	0	0	0	32	1
16:00:00	310	18	2949	124	321	14	9	0	109	5	4	0	0	0	0	0	0	0	33	1
16:15:00	320	10	3099	150	332	11	9	0	112	3	5	1	0	0	0	0	0	0	34	1
16:30:00	331	11	3240	141	352	20	9	0	115	3	5	0	0	0	0	0	0	0	35	1
16:45:00	345	14	3383	143	375	23	10	1	120	5	5	0	0	0	0	0	0	0	35	0
17:00:00	357	12	3535	152	394	19	10	0	122	2	6	1	0	0	0	0	0	0	38	3
17:15:00	365	8	3705	170	414	20	11	1	127	5	6	0	1	1	0	0	0	0	43	5
17:30:00	368	3	3859	154	438	24	11	0	131	4	7	1	1	0	0	0	0	0	48	5
17:45:00	385	17	4003	144	458	20	11	0	133	2	7	0	1	0	0	0	0	0	50	2
18:00:00	397	12	4141	138	470	12	11	0	136	3	7	0	1	0	0	0	0	0	52	2
18:15:00	406	9	4296	155	489	19	11	0	141	5	7	0	1	0	0	0	0	0	54	2
18:30:00	419	13	4407	111	507	18	12	1	145	4	7	0	1	0	0	0	0	0	56	2
18:45:00	419	0	4407	0	507	0	12	0	145	0	7	0	1	0	0	0	0	0	56	0
18:47:03	419	0	4407	0	507	0	12	0	145	0	7	0	1	0	0	0	0	0	56	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300008

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	21	21	9	9	9	9	1	1	1	1	0	0	0	0	0	0	0	0	1	1
7:30:00	31	10	20	11	13	4	1	0	1	0	0	0	0	0	1	1	0	0	2	1
7:45:00	41	10	27	7	21	8	2	1	2	1	0	0	0	0	1	0	0	0	2	0
8:00:00	56	15	31	4	24	3	2	0	2	0	0	0	0	0	1	0	0	0	3	1
8:15:00	61	5	43	12	29	5	2	0	3	1	1	1	0	0	1	0	0	0	4	1
8:30:00	75	14	57	14	38	9	3	1	3	0	1	0	0	0	1	0	0	0	9	5
8:45:00	82	7	80	23	44	6	4	1	6	3	1	0	0	0	1	0	0	0	9	0
9:00:00	87	5	104	24	56	12	5	1	6	0	1	0	0	0	1	0	0	0	11	2
9:15:00	95	8	124	20	67	11	7	2	8	2	1	0	0	0	1	0	0	0	11	0
9:30:00	115	20	143	19	70	3	7	0	8	0	1	0	0	0	1	0	0	0	12	1
9:45:00	125	10	164	21	75	5	8	1	8	0	3	2	0	0	1	0	0	0	16	4
10:00:00	134	9	179	15	83	8	9	1	9	1	3	0	0	0	1	0	0	0	18	2
10:02:14	134	0	179	0	83	0	9	0	9	0	3	0	0	0	1	0	0	0	18	0
11:30:00	134	0	179	0	83	0	9	0	9	0	3	0	0	0	1	0	0	0	18	0
11:45:00	163	29	211	32	103	20	11	2	11	2	4	1	0	0	1	0	0	0	22	4
12:00:00	183	20	240	29	113	10	11	0	13	2	4	0	0	0	1	0	0	0	25	3
12:15:00	216	33	276	36	136	23	12	1	13	0	4	0	0	0	1	0	0	0	29	4
12:30:00	246	30	311	35	151	15	12	0	13	0	4	0	0	0	1	0	0	0	30	1
12:45:00	270	24	343	32	162	11	13	1	13	0	4	0	0	0	1	0	0	0	31	1
13:00:00	288	18	384	41	177	15	14	1	14	1	4	0	0	0	1	0	0	0	34	3
13:15:00	300	12	426	42	190	13	15	1	14	0	4	0	0	0	1	0	0	0	38	4
13:30:00	319	19	459	33	207	17	15	0	14	0	4	0	0	0	1	0	0	0	39	1
13:30:50	319	0	459	0	207	0	15	0	14	0	4	0	0	0	1	0	0	0	39	0
15:30:00	319	0	459	0	207	0	15	0	14	0	4	0	0	0	1	0	0	0	39	0
15:45:00	337	18	496	37	217	10	17	2	14	0	4	0	0	0	1	0	0	0	41	2
16:00:00	355	18	534	38	228	11	17	0	16	2	4	0	0	0	2	1	0	0	43	2
16:15:00	378	23	579	45	244	16	17	0	16	0	4	0	0	0	3	1	0	0	45	2
16:30:00	406	28	612	33	272	28	19	2	16	0	4	0	0	0	3	0	0	0	46	1
16:45:00	446	40	654	42	305	33	20	1	18	2	4	0	0	0	4	1	0	0	47	1
17:00:00	465	19	702	48	324	19	21	1	19	1	4	0	0	0	5	1	0	0	48	1
17:15:00	486	21	759	57	354	30	21	0	19	0	5	1	0	0	6	1	0	0	50	2
17:30:00	521	35	814	55	366	12	21	0	22	3	5	0	0	0	6	0	0	0	51	1
17:45:00	544	23	863	49	385	19	21	0	22	0	5	0	0	0	6	0	0	0	51	0
18:00:00	565	21	910	47	402	17	21	0	24	2	5	0	0	0	6	0	0	0	51	0
18:15:00	593	28	963	53	410	8	21	0	24	0	5	0	0	0	6	0	0	0	54	3
18:30:00	617	24	998	35	421	11	21	0	25	1	5	0	0	0	6	0	0	0	55	1
18:45:00	617	0	998	0	421	0	21	0	25	0	5	0	0	0	6	0	0	0	55	0
18:47:03	617	0	998	0	421	0	21	0	25	0	5	0	0	0	6	0	0	0	55	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300008

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	40	40	10	10	1	1	4	4	1	1	0	0	0	0	0	0	1	1
7:30:00	9	5	111	71	25	15	1	0	9	5	1	0	0	0	0	0	0	0	1	0
7:45:00	17	8	180	69	41	16	2	1	12	3	1	0	0	0	1	1	0	0	1	0
8:00:00	29	12	297	117	64	23	2	0	17	5	1	0	0	0	1	0	0	0	2	1
8:15:00	38	9	411	114	76	12	2	0	24	7	1	0	0	0	2	1	0	0	2	0
8:30:00	54	16	526	115	101	25	4	2	26	2	2	1	0	0	2	0	0	0	6	4
8:45:00	69	15	649	123	112	11	4	0	30	4	3	1	0	0	2	0	0	0	6	0
9:00:00	91	22	774	125	129	17	8	4	35	5	3	0	0	0	2	0	0	0	6	0
9:15:00	118	27	892	118	146	17	10	2	39	4	4	1	0	0	2	0	0	0	10	4
9:30:00	140	22	1001	109	159	13	11	1	43	4	5	1	0	0	2	0	0	0	12	2
9:45:00	156	16	1118	117	169	10	11	0	47	4	5	0	0	0	2	0	0	0	12	0
10:00:00	175	19	1230	112	184	15	11	0	53	6	5	0	0	0	2	0	0	0	12	0
10:02:14	175	0	1230	0	184	0	11	0	53	0	5	0	0	0	2	0	0	0	12	0
11:30:00	175	0	1230	0	184	0	11	0	53	0	5	0	0	0	2	0	0	0	12	0
11:45:00	194	19	1370	140	193	9	12	1	58	5	8	3	0	0	2	0	0	0	13	1
12:00:00	219	25	1511	141	209	16	13	1	61	3	8	0	0	0	2	0	0	0	17	4
12:15:00	253	34	1648	137	215	6	15	2	66	5	8	0	0	0	2	0	0	0	18	1
12:30:00	284	31	1797	149	223	8	15	0	69	3	8	0	0	0	2	0	0	0	19	1
12:45:00	308	24	1932	135	235	12	16	1	70	1	8	0	0	0	2	0	0	0	23	4
13:00:00	333	25	2083	151	248	13	16	0	72	2	8	0	0	0	2	0	0	0	25	2
13:15:00	355	22	2234	151	258	10	16	0	76	4	10	2	0	0	2	0	0	0	26	1
13:30:00	386	31	2384	150	273	15	18	2	80	4	10	0	0	0	2	0	0	0	26	0
13:30:50	386	0	2384	0	273	0	18	0	80	0	10	0	0	0	2	0	0	0	26	0
15:30:00	386	0	2384	0	273	0	18	0	80	0	10	0	0	0	2	0	0	0	26	0
15:45:00	417	31	2531	147	283	10	18	0	85	5	10	0	0	0	2	0	0	0	26	0
16:00:00	457	40	2681	150	296	13	18	0	89	4	10	0	0	0	3	1	0	0	29	3
16:15:00	497	40	2849	168	302	6	18	0	94	5	10	0	0	0	3	0	0	0	29	0
16:30:00	544	47	2997	148	312	10	18	0	97	3	10	0	0	0	3	0	0	0	31	2
16:45:00	588	44	3174	177	328	16	18	0	102	5	10	0	0	0	3	0	0	0	33	2
17:00:00	629	41	3391	217	343	15	18	0	106	4	10	0	0	0	3	0	0	0	34	1
17:15:00	668	39	3600	209	351	8	18	0	109	3	10	0	0	0	3	0	0	0	34	0
17:30:00	716	48	3785	185	360	9	18	0	112	3	10	0	0	0	3	0	0	0	35	1
17:45:00	754	38	3949	164	369	9	18	0	116	4	10	0	0	0	3	0	0	0	37	2
18:00:00	787	33	4122	173	380	11	18	0	121	5	10	0	0	0	3	0	0	0	37	0
18:15:00	819	32	4288	166	394	14	18	0	125	4	10	0	0	0	3	0	0	0	39	2
18:30:00	847	28	4459	171	402	8	18	0	128	3	10	0	0	0	3	0	0	0	40	1
18:45:00	847	0	4459	0	402	0	18	0	128	0	10	0	0	0	3	0	0	0	40	0
18:47:03	847	0	4459	0	402	0	18	0	128	0	10	0	0	0	3	0	0	0	40	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300008

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	16	16	16	16	19	19	0	0	1	1	0	0	0	0	0	0	0	0	0	0
7:30:00	26	10	27	11	49	30	0	0	2	1	0	0	0	0	1	1	0	0	2	2
7:45:00	43	17	54	27	84	35	0	0	3	1	2	2	0	0	1	0	0	0	3	1
8:00:00	60	17	70	16	111	27	0	0	3	0	2	0	0	0	1	0	0	0	3	0
8:15:00	79	19	83	13	146	35	1	1	4	1	2	0	0	0	1	0	0	0	5	2
8:30:00	103	24	112	29	161	15	1	0	5	1	2	0	0	0	1	0	0	0	6	1
8:45:00	127	24	137	25	184	23	1	0	5	0	2	0	0	0	1	0	0	0	6	0
9:00:00	154	27	183	46	213	29	2	1	8	3	3	1	0	0	1	0	0	0	7	1
9:15:00	180	26	214	31	245	32	2	0	9	1	3	0	0	0	1	0	0	0	12	5
9:30:00	195	15	241	27	264	19	4	2	10	1	3	0	0	0	1	0	0	0	17	5
9:45:00	215	20	267	26	287	23	4	0	10	0	3	0	0	0	1	0	0	0	20	3
10:00:00	239	24	295	28	306	19	5	1	13	3	3	0	0	0	1	0	0	0	22	2
10:02:14	239	0	295	0	306	0	5	0	13	0	3	0	0	0	1	0	0	0	22	0
11:30:00	239	0	295	0	306	0	5	0	13	0	3	0	0	0	1	0	0	0	22	0
11:45:00	271	32	319	24	330	24	5	0	14	1	6	3	0	0	1	0	0	0	26	4
12:00:00	307	36	351	32	365	35	6	1	14	0	6	0	0	0	1	0	0	0	33	7
12:15:00	343	36	378	27	395	30	6	0	16	2	6	0	0	0	1	0	0	0	37	4
12:30:00	384	41	403	25	424	29	6	0	16	0	7	1	0	0	1	0	0	0	41	4
12:45:00	416	32	443	40	449	25	6	0	16	0	8	1	0	0	1	0	0	0	44	3
13:00:00	440	24	491	48	479	30	6	0	16	0	8	0	0	0	1	0	0	0	45	1
13:15:00	478	38	528	37	514	35	6	0	16	0	8	0	0	0	1	0	0	0	49	4
13:30:00	513	35	551	23	552	38	6	0	17	1	8	0	0	0	1	0	0	0	51	2
13:30:50	513	0	551	0	552	0	6	0	17	0	8	0	0	0	1	0	0	0	51	0
15:30:00	513	0	551	0	552	0	6	0	17	0	8	0	0	0	1	0	0	0	51	0
15:45:00	542	29	589	38	596	44	6	0	19	2	9	1	1	1	1	0	0	0	56	5
16:00:00	572	30	624	35	624	28	6	0	20	1	10	1	1	0	1	0	0	0	57	1
16:15:00	604	32	656	32	656	32	8	2	22	2	10	0	1	0	1	0	0	0	62	5
16:30:00	629	25	684	28	690	34	8	0	22	0	10	0	1	0	1	0	0	0	64	2
16:45:00	659	30	723	39	732	42	8	0	23	1	10	0	1	0	1	0	0	0	66	2
17:00:00	689	30	752	29	763	31	8	0	25	2	11	1	1	0	1	0	0	0	70	4
17:15:00	720	31	788	36	797	34	8	0	27	2	11	0	1	0	1	0	0	0	73	3
17:30:00	758	38	822	34	843	46	9	1	28	1	11	0	1	0	2	1	0	0	76	3
17:45:00	800	42	851	29	887	44	9	0	30	2	11	0	1	0	2	0	0	0	80	4
18:00:00	824	24	880	29	924	37	9	0	31	1	11	0	1	0	2	0	0	0	82	2
18:15:00	859	35	907	27	958	34	9	0	32	1	12	1	1	0	2	0	0	0	85	3
18:30:00	890	31	930	23	989	31	9	0	33	1	12	0	1	0	2	0	0	0	88	3
18:45:00	890	0	930	0	989	0	9	0	33	0	12	0	1	0	2	0	0	0	88	0
18:47:03	890	0	930	0	989	0	9	0	33	0	12	0	1	0	2	0	0	0	88	0

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

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

Municipality: Aurora
Site #: 1825300009
Intersection: Yonge St & Henderson Dr-Allaura
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1392
North Entering: 740
North Peds: 16
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	1	24	0	25
Cars	91	554	70	715
Totals	92	578	70	

Cyclists	1
Trucks	24
Cars	627
Totals	652

East Leg Total: 513
East Entering: 190
East Peds: 8
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	6	238	244

Henderson Dr

Cars	Trucks	Cyclists	Totals
63	2	0	65
71	4	0	75
50	0	0	50
184	6	0	

N
W E
S

Cyclists	Trucks	Cars	Totals
0	5	158	163
1	3	159	163
0	1	204	205
1	9	521	

Allaura Blvd

Cars	Trucks	Cyclists	Totals
316	6	1	323

Yonge St

Peds Cross: ⧗
West Peds: 16
West Entering: 531
West Leg Total: 775

Cars	808
Trucks	25
Cyclists	0
Totals	833

Cars	76	406	87	569
Trucks	1	17	3	21
Cyclists	0	1	0	1
Totals	77	424	90	

Peds Cross: ⋈
South Peds: 7
South Entering: 591
South Leg Total: 1424

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram

Specified Period
From: 11:30:00
To: 13:30:00

One Hour Peak
From: 12:00:00
To: 13:00:00

Municipality: Aurora
Site #: 1825300009
Intersection: Yonge St & Henderson Dr-Allaura
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1586
North Entering: 803
North Peds: 15
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	3	19	0	22
Cars	195	497	89	781
Totals	198	516	89	

Cyclists	0
Trucks	15
Cars	768
Totals	783

East Leg Total: 556
East Entering: 262
East Peds: 8
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	9	430	439

Henderson Dr

Cars	Trucks	Cyclists	Totals
89	1	0	90
108	3	0	111
58	3	0	61
255	7	0	

N

W E

S

Allaura Blvd

Cyclists	Trucks	Cars	Totals
0	0	171	171
1	3	126	130
0	3	95	98
1	6	392	

Cars	Trucks	Cyclists	Totals
288	5	1	294

Yonge St

Peds Cross: ⧗
West Peds: 16
West Entering: 399
West Leg Total: 838

Cars	650
Trucks	25
Cyclists	0
Totals	675

Cars	127	508	73	708
Trucks	3	14	2	19
Cyclists	0	0	0	0
Totals	130	522	75	

Peds Cross: ⋈
South Peds: 7
South Entering: 727
South Leg Total: 1402

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:30:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Aurora
Site #: 1825300009
Intersection: Yonge St & Henderson Dr-Allaura
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 1933
North Entering: 893
North Peds: 17
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	1	16	0	17
Cars	264	554	58	876
Totals	265	570	58	

Cyclists	1
Trucks	16
Cars	1023
Totals	1040

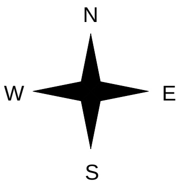
East Leg Total: 540
East Entering: 307
East Peds: 11
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
0	3	748	751

Cars	Trucks	Cyclists	Totals
63	0	0	63
175	2	0	177
65	2	0	67
303	4	0	

Henderson Dr



Cyclists	Trucks	Cars	Totals
0	0	190	190
3	3	116	122
0	2	110	112
3	5	416	

Allaura Blvd

Cars	Trucks	Cyclists	Totals
226	4	3	233

Yonge St

Peds Cross: ⧗
West Peds: 18
West Entering: 424
West Leg Total: 1175

Cars	729
Trucks	20
Cyclists	0
Totals	749

Cars	309	770	52	1131
Trucks	0	16	1	17
Cyclists	0	1	0	1
Totals	309	787	53	

Peds Cross: ⋈
South Peds: 20
South Entering: 1149
South Leg Total: 1898

Comments

Ontario Traffic Inc.

Total Count Diagram

Municipality: Aurora
Site #: 1825300009
Intersection: Yonge St & Henderson Dr-Allaura
TFR File #: 1
Count date: 27-Jun-18

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Yonge St runs N/S

North Leg Total: 12265
North Entering: 6191
North Peds: 125
Peds Cross: ⋈

Cyclists	0	0	0	0
Trucks	18	154	2	174
Cars	1356	4131	530	6017
Totals	1374	4285	532	

Cyclists	9
Trucks	154
Cars	5911
Totals	6074

East Leg Total: 3905
East Entering: 1838
East Peds: 66
Peds Cross: ⧗

Yonge St

Cyclists	Trucks	Cars	Totals
1	54	3390	3445

Cars	Trucks	Cyclists	Totals
500	8	0	508
836	23	0	859
449	22	0	471
1785	53	0	

Henderson Dr

N
W E
S

Cyclists	Trucks	Cars	Totals
2	9	1281	1292
5	22	980	1007
0	16	1024	1040
7	47	3285	

Allaura Blvd

Cars	Trucks	Cyclists	Totals
2008	54	5	2067

Yonge St

Peds Cross: ⧗
West Peds: 114
West Entering: 3339
West Leg Total: 6784

Cars	5604
Trucks	192
Cyclists	0
Totals	5796

Cars	1198	4130	498	5826
Trucks	13	137	30	180
Cyclists	1	7	0	8
Totals	1212	4274	528	

Peds Cross: ⋈
South Peds: 74
South Entering: 6014
South Leg Total: 11810

Comments

Ontario Traffic Inc.

Traffic Count Summary

Intersection: Yonge St & Henderson Dr-Allaura | **Count Date:** 27-Jun-18 | **Municipality:** Aurora

North Approach Totals							South Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	52	586	68	706	9	1072	8:00:00	37	276	53	366	6
9:00:00	70	578	92	740	16	1331	9:00:00	77	424	90	591	7
10:00:00	75	503	98	676	14	1265	10:00:00	74	451	64	589	11
12:00:00	39	245	92	376	6	737	12:00:00	69	263	29	361	4
13:00:00	89	516	198	803	15	1530	13:00:00	130	522	75	727	7
16:00:00	65	511	191	767	19	1592	16:00:00	164	587	74	825	8
17:00:00	60	539	250	849	21	1874	17:00:00	257	711	57	1025	16
18:00:00	54	561	260	875	12	1937	18:00:00	294	713	55	1062	15
Totals:	504	4039	1249	5792	112	11338		1102	3947	497	5546	74

East Approach Totals							West Approach Totals					
	Includes Cars, Trucks, & Cyclists							Includes Cars, Trucks, & Cyclists				
Hour Ending	Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches	Hour Ending	Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	65	66	35	166	6	639	8:00:00	108	153	212	473	10
9:00:00	50	75	65	190	8	721	9:00:00	163	163	205	531	16
10:00:00	54	75	64	193	9	553	10:00:00	137	107	116	360	12
12:00:00	29	47	26	102	6	281	12:00:00	74	52	53	179	7
13:00:00	61	111	90	262	8	661	13:00:00	171	130	98	399	16
16:00:00	63	101	71	235	6	605	16:00:00	162	109	99	370	12
17:00:00	48	147	63	258	12	651	17:00:00	182	118	93	393	15
18:00:00	72	164	69	305	11	719	18:00:00	190	116	108	414	15
Totals:	442	786	483	1711	66	4830		1187	948	984	3119	103

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	10:00	12:00	13:00	16:00	17:00	18:00
Crossing Values:	341	399	323	165	384	361	414	453

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300009

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	10	10	133	133	15	15	0	0	5	5	1	1	0	0	0	0	0	0	3	3
7:30:00	20	10	262	129	27	12	0	0	11	6	1	0	0	0	0	0	0	0	4	1
7:45:00	39	19	440	178	48	21	0	0	16	5	1	0	0	0	0	0	0	0	6	2
8:00:00	52	13	564	124	67	19	0	0	22	6	1	0	0	0	0	0	0	0	9	3
8:15:00	65	13	730	166	95	28	0	0	27	5	1	0	0	0	0	0	0	0	13	4
8:30:00	80	15	874	144	116	21	0	0	33	6	2	1	0	0	0	0	0	0	15	2
8:45:00	99	19	1006	132	140	24	0	0	39	6	2	0	0	0	0	0	0	0	18	3
9:00:00	122	23	1118	112	158	18	0	0	46	7	2	0	0	0	0	0	0	0	25	7
9:15:00	142	20	1263	145	181	23	0	0	54	8	2	0	0	0	0	0	0	0	32	7
9:30:00	160	18	1376	113	203	22	1	1	59	5	3	1	0	0	0	0	0	0	35	3
9:45:00	178	18	1493	117	225	22	1	0	63	4	5	2	0	0	0	0	0	0	38	3
10:00:00	196	18	1599	106	252	27	1	0	68	5	6	1	0	0	0	0	0	0	39	1
10:01:46	196	0	1599	0	252	0	1	0	68	0	6	0	0	0	0	0	0	0	39	0
11:30:00	196	0	1599	0	252	0	1	0	68	0	6	0	0	0	0	0	0	0	39	0
11:45:00	215	19	1709	110	301	49	2	1	76	8	9	3	0	0	0	0	0	0	42	3
12:00:00	234	19	1832	123	341	40	2	0	80	4	9	0	0	0	0	0	0	0	45	3
12:15:00	259	25	1974	142	396	55	2	0	83	3	9	0	0	0	0	0	0	0	47	2
12:30:00	288	29	2086	112	447	51	2	0	88	5	9	0	0	0	0	0	0	0	51	4
12:45:00	305	17	2203	117	497	50	2	0	92	4	10	1	0	0	0	0	0	0	54	3
13:00:00	323	18	2329	126	536	39	2	0	99	7	12	2	0	0	0	0	0	0	60	6
13:15:00	340	17	2462	133	578	42	2	0	103	4	13	1	0	0	0	0	0	0	66	6
13:30:00	358	18	2571	109	636	58	2	0	107	4	13	0	0	0	0	0	0	0	72	6
13:30:58	358	0	2571	0	636	0	2	0	107	0	13	0	0	0	0	0	0	0	72	0
15:30:00	358	0	2571	0	636	0	2	0	107	0	13	0	0	0	0	0	0	0	72	0
15:45:00	376	18	2709	138	681	45	2	0	114	7	14	1	0	0	0	0	0	0	76	4
16:00:00	388	12	2823	114	723	42	2	0	116	2	16	2	0	0	0	0	0	0	79	3
16:15:00	401	13	2957	134	780	57	2	0	120	4	16	0	0	0	0	0	0	0	83	4
16:30:00	420	19	3086	129	841	61	2	0	124	4	16	0	0	0	0	0	0	0	88	5
16:45:00	432	12	3232	146	906	65	2	0	129	5	16	0	0	0	0	0	0	0	95	7
17:00:00	448	16	3346	114	972	66	2	0	132	3	17	1	0	0	0	0	0	0	100	5
17:15:00	460	12	3498	152	1031	59	2	0	137	5	17	0	0	0	0	0	0	0	100	0
17:30:00	478	18	3640	142	1105	74	2	0	140	3	17	0	0	0	0	0	0	0	105	5
17:45:00	494	16	3768	128	1169	64	2	0	141	1	18	1	0	0	0	0	0	0	108	3
18:00:00	502	8	3895	127	1231	62	2	0	144	3	18	0	0	0	0	0	0	0	112	4
18:15:00	514	12	4031	136	1299	68	2	0	150	6	18	0	0	0	0	0	0	0	119	7
18:30:00	530	16	4131	100	1356	57	2	0	154	4	18	0	0	0	0	0	0	0	125	6
18:45:00	530	0	4131	0	1356	0	2	0	154	0	18	0	0	0	0	0	0	0	125	0
18:46:15	530	0	4131	0	1356	0	2	0	154	0	18	0	0	0	0	0	0	0	125	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300009

	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
Interval Time	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	21	21	16	16	6	6	0	0	0	0	0	0	0	0	0	0	0	0	3	3
7:30:00	33	12	26	10	13	7	1	1	1	1	0	0	0	0	0	0	0	0	3	0
7:45:00	48	15	45	19	20	7	3	2	1	0	0	0	0	0	0	0	0	0	3	0
8:00:00	62	14	64	19	34	14	3	0	2	1	1	1	0	0	0	0	0	0	6	3
8:15:00	73	11	88	24	39	5	3	0	3	1	1	0	0	0	0	0	0	0	8	2
8:30:00	86	13	98	10	55	16	3	0	4	1	3	2	0	0	0	0	0	0	9	1
8:45:00	98	12	116	18	80	25	3	0	5	1	3	0	0	0	0	0	0	0	14	5
9:00:00	112	14	135	19	97	17	3	0	6	1	3	0	0	0	0	0	0	0	14	0
9:15:00	129	17	154	19	110	13	4	1	6	0	3	0	0	0	0	0	0	0	14	0
9:30:00	138	9	174	20	130	20	4	0	7	1	3	0	0	0	0	0	0	0	14	0
9:45:00	147	9	193	19	142	12	4	0	7	0	3	0	0	0	0	0	0	0	19	5
10:00:00	164	17	209	16	160	18	5	1	7	0	4	1	0	0	0	0	0	0	23	4
10:01:46	164	0	209	0	160	0	5	0	7	0	4	0	0	0	0	0	0	0	23	0
11:30:00	164	0	209	0	160	0	5	0	7	0	4	0	0	0	0	0	0	0	23	0
11:45:00	171	7	233	24	176	16	5	0	9	2	7	3	0	0	0	0	0	0	27	4
12:00:00	190	19	254	21	183	7	8	3	9	0	7	0	0	0	0	0	0	0	29	2
12:15:00	203	13	285	31	200	17	10	2	10	1	8	1	0	0	0	0	0	0	32	3
12:30:00	220	17	312	27	228	28	10	0	10	0	8	0	0	0	0	0	0	0	36	4
12:45:00	235	15	344	32	251	23	10	0	12	2	8	0	0	0	0	0	0	0	37	1
13:00:00	248	13	362	18	272	21	11	1	12	0	8	0	0	0	0	0	0	0	37	0
13:15:00	268	20	384	22	297	25	12	1	12	0	8	0	0	0	0	0	0	0	39	2
13:30:00	284	16	412	28	310	13	15	3	12	0	8	0	0	0	0	0	0	0	40	1
13:30:58	284	0	412	0	310	0	15	0	12	0	8	0	0	0	0	0	0	0	40	0
15:30:00	284	0	412	0	310	0	15	0	12	0	8	0	0	0	0	0	0	0	40	0
15:45:00	295	11	434	22	327	17	15	0	14	2	8	0	0	0	0	0	0	0	42	2
16:00:00	305	10	460	26	343	16	17	2	15	1	8	0	0	0	0	0	0	0	43	1
16:15:00	319	14	496	36	357	14	17	0	16	1	8	0	0	0	0	0	0	0	50	7
16:30:00	325	6	526	30	376	19	18	1	18	2	8	0	0	0	0	0	0	0	51	1
16:45:00	341	16	575	49	396	20	18	0	19	1	8	0	0	0	0	0	0	0	53	2
17:00:00	351	10	603	28	406	10	19	1	19	0	8	0	0	0	0	0	0	0	55	2
17:15:00	377	26	648	45	422	16	19	0	20	1	8	0	0	0	0	0	0	0	59	4
17:30:00	390	13	701	53	439	17	20	1	20	0	8	0	0	0	0	0	0	0	62	3
17:45:00	408	18	732	31	456	17	21	1	22	2	8	0	0	0	0	0	0	0	63	1
18:00:00	421	13	764	32	475	19	21	0	22	0	8	0	0	0	0	0	0	0	66	3
18:15:00	430	9	802	38	493	18	22	1	23	1	8	0	0	0	0	0	0	0	66	0
18:30:00	449	19	836	34	500	7	22	0	23	0	8	0	0	0	0	0	0	0	66	0
18:45:00	449	0	836	0	500	0	22	0	23	0	8	0	0	0	0	0	0	0	66	0
18:46:15	449	0	836	0	500	0	22	0	23	0	8	0	0	0	0	0	0	0	66	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 Site #: 1825300009

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	8	8	35	35	13	13	0	0	5	5	1	1	0	0	0	0	0	0	2	2
7:30:00	13	5	92	57	23	10	1	1	10	5	3	2	0	0	0	0	0	0	4	2
7:45:00	19	6	150	58	38	15	1	0	14	4	4	1	0	0	1	1	0	0	4	0
8:00:00	35	16	258	108	48	10	2	1	17	3	5	1	0	0	1	0	0	0	6	2
8:15:00	54	19	353	95	70	22	2	0	23	6	5	0	0	0	2	1	0	0	8	2
8:30:00	74	20	458	105	88	18	2	0	26	3	6	1	0	0	2	0	0	0	11	3
8:45:00	91	17	542	84	111	23	2	0	30	4	7	1	0	0	2	0	0	0	13	2
9:00:00	111	20	664	122	135	24	3	1	34	4	8	1	0	0	2	0	0	0	13	0
9:15:00	129	18	788	124	147	12	4	1	40	6	9	1	0	0	2	0	0	0	13	0
9:30:00	148	19	894	106	167	20	5	1	46	6	12	3	0	0	2	0	0	0	14	1
9:45:00	164	16	994	100	179	12	6	1	50	4	13	1	0	0	2	0	0	0	20	6
10:00:00	182	18	1094	100	192	13	6	0	55	5	15	2	0	0	2	0	0	0	24	4
10:01:46	182	0	1094	0	192	0	6	0	55	0	15	0	0	0	2	0	0	0	24	0
11:30:00	182	0	1094	0	192	0	6	0	55	0	15	0	0	0	2	0	0	0	24	0
11:45:00	216	34	1215	121	207	15	6	0	61	6	16	1	0	0	2	0	0	0	27	3
12:00:00	250	34	1347	132	220	13	6	0	65	4	16	0	1	1	2	0	0	0	28	1
12:15:00	278	28	1469	122	241	21	6	0	71	6	16	0	1	0	2	0	0	0	31	3
12:30:00	321	43	1609	140	258	17	7	1	74	3	16	0	1	0	2	0	0	0	33	2
12:45:00	352	31	1728	119	278	20	7	0	76	2	18	2	1	0	2	0	0	0	35	2
13:00:00	377	25	1855	127	293	15	9	2	79	3	18	0	1	0	2	0	0	0	35	0
13:15:00	411	34	1978	123	313	20	11	2	84	5	20	2	1	0	2	0	0	0	36	1
13:30:00	442	31	2122	144	333	20	12	1	90	6	21	1	1	0	2	0	0	0	37	1
13:30:58	442	0	2122	0	333	0	12	0	90	0	21	0	1	0	2	0	0	0	37	0
15:30:00	442	0	2122	0	333	0	12	0	90	0	21	0	1	0	2	0	0	0	37	0
15:45:00	482	40	2265	143	346	13	12	0	93	3	21	0	1	0	2	0	0	0	42	5
16:00:00	538	56	2422	157	362	16	12	0	98	5	23	2	1	0	3	1	0	0	43	1
16:15:00	587	49	2582	160	373	11	12	0	102	4	25	2	1	0	4	1	0	0	49	6
16:30:00	648	61	2734	152	387	14	12	0	104	2	25	0	1	0	5	1	0	0	50	1
16:45:00	723	75	2907	173	408	21	12	0	109	5	25	0	1	0	5	0	0	0	56	6
17:00:00	795	72	3116	209	417	9	12	0	113	4	25	0	1	0	5	0	0	0	59	3
17:15:00	869	74	3325	209	427	10	12	0	117	4	25	0	1	0	5	0	0	0	66	7
17:30:00	957	88	3504	179	439	12	12	0	120	3	26	1	1	0	6	1	0	0	70	4
17:45:00	1022	65	3658	154	456	17	13	1	124	4	26	0	1	0	6	0	0	0	72	2
18:00:00	1088	66	3812	154	469	13	13	0	129	5	28	2	1	0	6	0	0	0	74	2
18:15:00	1147	59	3972	160	484	15	13	0	133	4	30	2	1	0	7	1	0	0	74	0
18:30:00	1198	51	4130	158	498	14	13	0	137	4	30	0	1	0	7	0	0	0	74	0
18:45:00	1198	0	4130	0	498	0	13	0	137	0	30	0	1	0	7	0	0	0	74	0
18:46:15	1198	0	4130	0	498	0	13	0	137	0	30	0	1	0	7	0	0	0	74	0

Ontario Traffic Inc.

Count Date: 27-Jun-18 **Site #: 1825300009**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	19	19	28	28	40	40	0	0	1	1	0	0	0	0	0	0	0	0	2	2
7:30:00	42	23	62	34	103	63	0	0	1	0	0	0	0	0	0	0	0	0	4	2
7:45:00	72	30	104	42	158	55	0	0	2	1	0	0	0	0	0	0	0	0	8	4
8:00:00	107	35	151	47	212	54	1	1	2	0	0	0	0	0	0	0	0	0	10	2
8:15:00	149	42	194	43	273	61	2	1	3	1	0	0	0	0	0	0	0	0	12	2
8:30:00	183	34	236	42	328	55	2	0	3	0	0	0	0	0	1	1	0	0	17	5
8:45:00	227	44	277	41	377	49	3	1	5	2	0	0	0	0	1	0	0	0	18	1
9:00:00	265	38	310	33	416	39	6	3	5	0	1	1	0	0	1	0	0	0	26	8
9:15:00	302	37	334	24	444	28	7	1	6	1	1	0	0	0	1	0	0	0	29	3
9:30:00	335	33	369	35	472	28	7	0	6	0	3	2	0	0	1	0	0	0	31	2
9:45:00	363	28	393	24	496	24	7	0	6	0	3	0	0	0	1	0	0	0	36	5
10:00:00	400	37	414	21	530	34	8	1	8	2	3	0	0	0	1	0	0	0	38	2
10:01:46	400	0	414	0	530	0	8	0	8	0	3	0	0	0	1	0	0	0	38	0
11:30:00	400	0	414	0	530	0	8	0	8	0	3	0	0	0	1	0	0	0	38	0
11:45:00	432	32	443	29	554	24	8	0	10	2	3	0	0	0	1	0	0	0	42	4
12:00:00	474	42	464	21	582	28	8	0	10	0	4	1	0	0	1	0	0	0	45	3
12:15:00	514	40	498	34	602	20	8	0	12	2	5	1	0	0	1	0	0	0	48	3
12:30:00	551	37	524	26	629	27	8	0	12	0	5	0	0	0	1	0	0	0	54	6
12:45:00	600	49	561	37	652	23	8	0	12	0	7	2	0	0	1	0	0	0	54	0
13:00:00	645	45	590	29	677	25	8	0	13	1	7	0	0	0	2	1	0	0	61	7
13:15:00	686	41	621	31	693	16	8	0	13	0	7	0	0	0	2	0	0	0	66	5
13:30:00	738	52	646	25	718	25	9	1	13	0	9	2	0	0	2	0	0	0	67	1
13:30:58	738	0	646	0	718	0	9	0	13	0	9	0	0	0	2	0	0	0	67	0
15:30:00	738	0	646	0	718	0	9	0	13	0	9	0	0	0	2	0	0	0	67	0
15:45:00	771	33	671	25	740	22	9	0	14	1	10	1	0	0	2	0	0	0	69	2
16:00:00	804	33	697	26	773	33	9	0	15	1	10	0	2	2	2	0	0	0	73	4
16:15:00	857	53	720	23	791	18	9	0	15	0	12	2	2	0	2	0	0	0	79	6
16:30:00	894	37	744	24	809	18	9	0	16	1	12	0	2	0	2	0	0	0	81	2
16:45:00	939	45	774	30	835	26	9	0	16	0	12	0	2	0	2	0	0	0	86	5
17:00:00	986	47	812	38	864	29	9	0	18	2	12	0	2	0	2	0	0	0	88	2
17:15:00	1032	46	838	26	887	23	9	0	18	0	14	2	2	0	4	2	0	0	92	4
17:30:00	1084	52	860	22	919	32	9	0	19	1	14	0	2	0	5	1	0	0	99	7
17:45:00	1131	47	888	28	940	21	9	0	19	0	14	0	2	0	5	0	0	0	101	2
18:00:00	1176	45	923	35	970	30	9	0	20	1	14	0	2	0	5	0	0	0	103	2
18:15:00	1230	54	947	24	995	25	9	0	20	0	15	1	2	0	5	0	0	0	109	6
18:30:00	1281	51	980	33	1024	29	9	0	22	2	16	1	2	0	5	0	0	0	114	5
18:45:00	1281	0	980	0	1024	0	9	0	22	0	16	0	2	0	5	0	0	0	114	0
18:46:15	1281	0	980	0	1024	0	9	0	22	0	16	0	2	0	5	0	0	0	114	0

PEEK TRAFFIC

INTERSECTION NAME: **Yonge @ Orchard Heights**
PROGRAMMED BY: MIKE HORNE
CONTOLLER SERIAL #:

CTCS #:
ADDRESS: 16
SECURITY CODE: **1000**
PROGRAM DATE:
INSTALLATION DATE: April25, 2012

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**N/B LT**	5 -	**Not Used**
2 -	**Southbound**	6 -	**Northbound**
3 -	**Not Used**	7 -	**Not Used**
4 -	**Eastbound**	8 -	**Westbound**

PHASE TIMINGS (MM-2-2-2)

	1	2	3	4	5	6	7	8
MIN GREEN	**7**	**40**	0	**10**	0	**40**	0	**10**
PASSAGE	**4.0**	0	0	**4.0**	0	0	0	**4.0**
YELLOW	**3.0**	**4.5**	0	**4.0**	0	**4.5**	0	**4.0**
RED	0	**2.0**	0	**2.0**	0	**2.0**	0	**2.0**
MAX I	**9**	**40**	0	**27**	0	**40**	0	**27**
MAX II	**20**	**40**	0	**40**	0	**40**	0	**40**
WALK	0	**7**	0	**7**	0	**7**	0	**7**
PED CLEAR	0	**18**	0	**22**	0	**18**	0	**22**
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**ON**	**ON**	**OFF**	**ON**	**OFF**	**ON**	**OFF**	**ON**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4) 1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	**2**	**2**	**2**
RING 2 PHASE	**6**	**6**	**6**
INTERVAL	**1**	**1**	**1**

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

11-Jun-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Batson Dr./ Orchard Heights**

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	11 52 00 37 00 63 00 37	90	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	11 52 00 37 00 63 00 37	89	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	11 52 00 37 00 63 00 37	77	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

18-May-2012

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : Yonge St. (Town of Aurora) - Batson Dr./ Orchard Heights

Weekly Plan : Yonge at Bat/ Orchard

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: Yonge at Bat/ Orchard

Default Weekly Schedule : Yonge at Bat/ Orchard

Date	Schedule (If blank, use the default weekly schedule)

18-May-2012

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : Yonge St. (Town of Aurora) - Aurora Heights Dr./ Mark St.

Weekly Plan : Yonge at (T of A)Aurora

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: Yonge at (T of A)Aurora

Default Weekly Schedule : Yonge at (T of A)Aurora

Date	Schedule (If blank, use the default weekly schedule)

11-Jun-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Aurora Heights Dr./ Mark St.**

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	11 56 00 33 00 67 00 33	37	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	11 52 00 37 00 63 00 37	40	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	16 50 00 34 00 66 00 34	33	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

PEEK TRAFFIC

CTCS #:
INTERSECTION NAME: **Yonge @Aurora Heights/Mark**
ADDRESS:
PROGRAMMED BY: T. Hanrahan
SECURITY CODE: **1000**
CONTOLLER SERIAL #:
PROGRAM DATE: December 20, 2011
INSTALLATION DATE:

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**N/B LT**	**5 -**	**Not Used**
2 -	**North/South**	**6 -**	**Not Used**
3 -	**Not Used**	**7 -**	**Not Used**
4 -	**East/West**	**8 -**	**Not Used**

PHASE TIMINGS (MM-2-2-2)

	1	2	3	4	5	6	7	8
MIN GREEN	**7**	**40**	**0**	**10**	**0**	**0**	**0**	**0**
PASSAGE	**0.0**	**0.0**	**0**	**4.0**	**0**	**0**	**0**	**0**
YELLOW	**3.0**	**4.5**	**0**	**4.0**	**0**	**0**	**0**	**0**
RED	**0.0**	**2.0**	**0**	**2.0**	**0**	**0**	**0**	**0**
MAX I	**9**	**40**	**0**	**27**	**0**	**0**	**0**	**0**
MAX II	**20**	**40**	**0**	**40**	**0**	**0**	**0**	**0**
WALK	0	**7**	**0**	**7**	**0**	**0**	**0**	**0**
PED CLEAR	0	**13**	0	**16**	**0**	**0**	**0**	**0**
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**ON**	**ON**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**	**OFF**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4) 1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	**2**	**2**	**2**
RING 2 PHASE	**6**	**6**	**6**
INTERVAL	**2**	**1**	**2**

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

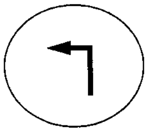
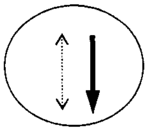
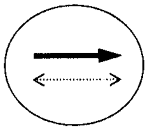
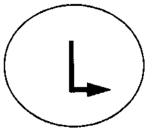
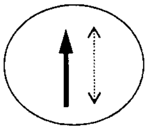
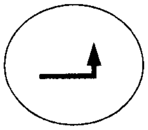
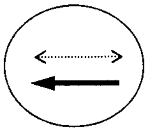
MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

LOCATION: Yonge St (YR 1) & Wellir St (YR 15)
CTCS: 100
MODE/COMMENT: SA with TSP & Red Light Camera
PREPARED/CHECKED BY: AM
PREPARATION DATE: November 16, 2017
IMPLEMENTATION DATE: November 21, 2017

UNICIPALITY: Aurora
C TER SYSTEM: Centracs
CONTROLLER/CABINET TYPE: Econolite Cobalt / TS2T1
CONFLICT FLASH: Red & Red
DESIGN WALK SPEED: 1.0 m/s (FDW based on full crossing at 1.2 m/s)
CHANNEL/DROP:

N ↑

NEMA Phase (York)		AM 6:00-9:30 M-F & Sat&Sun	PM 16:00-23:59 M-F	OFF 9:30-16:00, 00:00-6:00 M-F 9:30-23:59, 00:00-6:00 Sat& Sun	Phase Mode (Fixed/Demanded/Callable)
	Local Plan	Pattern 1	Pattern 2	Pattern 3	
	System Plan	Plan 1	Plan 2	Plan 3	
1. N/B Left Turn Arrow	WLK				Callable/Extendable by Setback Loop
	FDW				
	MIN 7				
	EXT 3				
	MAX1 7				
	MAX2 0				
	AMB 3				
	ALR 1				
	SPLIT	0	16	0	
2. Southbound	WLK 7				Fixed TSP extension of 5 secs when SLOW or 10 secs when VERY SLOW
	FDW 16				
	MIN 30				
	EXT 0				
	MAX1 30				
	MAX2 0				
	AMB 4.1				
	ALR 2.0				
Yonge St	SPLIT	58	42	63	
3.	WLK				
NOT USED	FDW				
	MIN				
	EXT				
	MAX1				
	MAX2				
	AMB				
	ALR				
	SPLIT				
4. Eastbound	WLK 7				Callable by stopbar loop and/or pushbutton; Extendable by stopbar loop.
	FDW 16				
	MIN 10				
	EXT 3				
	MAX1 19				
	MAX2 0				
	AMB 4.0				
	ALR 2.0				
Wellington St	SPLIT	62	62	47	
5. S/B Left Turn Arrow	WLK				Callable/Extendable by Setback Loop
	FDW				
	MIN 7				
	EXT 3				
	MAX1 7				
	MAX2 0				
	AMB 3.0				
	ALR 1.0				
	SPLIT	14	0	12	
6. Northbound	WLK 7				Fixed TSP extension of 5 secs when SLOW or 10 secs when VERY SLOW
	FDW 16				
	MIN 30				
	EXT 0				
	MAX1 30				
	MAX2 0				
	AMB 4.1				
	ALR 2.0				
Yonge St	SPLIT	44	58	51	
7. E/B Left Turn Arrow	WLK				Callable/Extendable by Setback Loop
	FDW				
	MIN 7				
	EXT 3				
	MAX1 7				
	MAX2 0				
	AMB 3.0				
	ALR 1.0				
	SPLIT	16	16	12	
8. Westbound	WLK 7				Callable by stopbar loop and/or pushbutton; Extendable by stopbar loop.
	FDW 16				
	MIN 10				
	EXT 3				
	MAX1 19				
	MAX2 0				
	AMB 4.0				
	ALR 2.0				
Wellington St	SPLIT	46	46	35	
	CL	120	120	110	
	OF	60	100	50	
	VP	16	16	16	

Remarks

Pedestrian Minimums:
NSWK = 7 sec., NSFD = 16 sec.
EWWK = 7 sec., EWFD = 16 sec.

Emergency vehicle pre-emption 3:

Serve SBG/NSDW min 20 secs and up to 100 secs if there are continuous emergency calls in SB direction.

Emergency vehicle pre-emption 4:

Serve NBG/NSDW min 20 secs and up to 100 secs if there are continuous emergency calls in NB direction.

EW phase is callable by vehicle or pedestrian actuation. If a vehicle call is received, the minimum EWG is 10 seconds. If ongoing vehicle demand exists on the stopbar loop, the EWG is capable of providing vehicle extensions up to the maximum green split during coordinated operation or 19 secs during Free operation. If a pedestrian call is received, the pedestrian minimum will be served. The EWWK & EWFD are only displayed on the pedestrian signal heads if a pedestrian call is received. Extension time is based on vehicle demand. Unused extension time is given to the NSG.

During coordinated operation, the signal constantly cycles through main street FDW to improve response time to side street vehicle and pedestrian demand.

During free plan, signal rests in NSWK and does not cycle through NSFD unless there is side street vehicle or pedestrian demand.

NSFD reverts to NSWK if there is no side street demand at the end of the NSFD.

LEGEND:

SA - Semi-Actuated signal
WLK - Walk time
FDW - Flashing Don't Walk time
MIN - Minimum green time
EXT - Extension time
MAX1 - Maximum green time 1
MAX2 - Maximum green time 2
AMB - Amber
ALR -All Red
CL - Cycle Length
OF - Offset
VP - Vehicle Permissive
NSWK - North/South Walk
EWWK - East/West Walk
NSG - North/South Green
EWG - East/West Green
NSFD - North/South Flashing Don't Walk
EWFD - East/West Flashing Don't Walk
TSP - Transit Priority
APS - Audible Pedestrian Signal
RLC - Red Light Camera

NOTES:

18-May-2012

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : Yonge St. (Town of Aurora) - Kennedy St.

Weekly Plan : Yonge at Kennedy

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: Yonge at Kennedy

Default Weekly Schedule : Yonge at Kennedy

Date	Schedule (If blank, use the default weekly schedule)

PEEK TRAFFIC

INTERSECTION NAME: **Yonge @ Kennedy**
PROGRAMMED BY: D.Rumble
CONTOLLER SERIAL #:

CTCS #:
ADDRESS:
SECURITY CODE: **1000**
PROGRAM DATE: December 20, 2011
INSTALLATION DATE: July 7, 2006

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**Not Used**	5 -	**Not Used**
2 -	**Southbound**	6 -	**Northbound**
3 -	**Not Used**	7 -	**Not Used**
4 -	**Eastbound**	8 -	**Westbound**

PHASE TIMINGS (MM-2-2-2)

	1	2	3	4	5	6	7	8
MIN GREEN	0	**20**	**0**	**10**	**0**	**20**	**0**	**10**
PASSAGE	0	**5.0**	**0**	**3.0**	**0**	**5.0**	**0**	**3.0**
YELLOW	0	**4.5**	**0**	**4.0**	**0**	**4.5**	**0**	**4.0**
RED	0	**2.0**	**0**	**2.0**	**0**	**2.0**	**0**	**2.0**
MAX I	0	**40**	**0**	**30**	**0**	**40**	**0**	**30**
MAX II	0	**69**	**0**	**43**	**0**	**69**	**0**	**43**
WALK	0	**7**	**0**	**7**	**0**	**7**	**0**	**7**
PED CLEAR	0	**10**	0	**13**	**0**	**10**	0	**13**
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**OFF**	**ON**	**OFF**	**ON**	**OFF**	**ON**	**OFF**	**ON**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4) 1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	**2**	**2**	**2**
RING 2 PHASE	**6**	**6**	**6**
INTERVAL	**2**	**1**	**2**

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

11-Jun-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

York Region

Intersection Name : **Yonge St. (Town of Aurora) - Kennedy St.**

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	00 65 00 35 00 65 00 35	27	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	00 66 00 34 00 66 00 34	29	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	00 67 00 33 00 67 00 33	15	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

19-Dec-2011

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : Yonge St. (Town of Aurora) - Dunning Ave. & Brookland Av

Weekly Plan : Yonge at Dunn/Brook

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: Yonge at Dunn/Brook

Default Weekly Schedule : Yonge at Dunn/Brook

Date	Schedule (If blank, use the default weekly schedule)

31-May-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Dunning Ave. & Brookland Ave**

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	00 62 00 38 00 62 00 38	76	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	00 64 00 36 00 64 00 36	30	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	00 64 00 36 00 64 00 36	69	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

PEEK TRAFFIC

CTCS #: 650

INTERSECTION NAME: **Yonge @ Golf Links/Brookland**

ADDRESS: 21

PROGRAMMED BY: T. Hanrahan

SECURITY CODE: **1000**

CONTOLLER SERIAL #:

PROGRAM DATE:

INSTALLATION DATE:

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**N/B LT**	**5 -**	**Not Used**
2 -	**North/South**	**6 -**	**Not Used**
3 -	**Not Used**	**7 -**	**Not Used**
4 -	**East/West**	**8 -**	**Not Used**

PHASE TIMINGS (MM-2-2-2)

	1	2	3	4	5	6	7	8
MIN GREEN	**0**	**40**	**0**	**10**	**0**	**0**	**0**	**0**
PASSAGE	**0.0**	**0.0**	**0**	**3.0**	**0**	**0**	**0**	**0**
YELLOW	**0.0**	**4.5**	**0**	**4.0**	**0**	**0**	**0**	**0**
RED	**0.0**	**2.0**	**0**	**2.0**	**0**	**0**	**0**	**0**
MAX I	**0**	**40**	**0**	**28**	**0**	**0**	**0**	**0**
MAX II	**0**	**40**	**0**	**40**	**0**	**0**	**0**	**0**
WALK	0	**7**	**0**	**7**	**0**	**0**	**0**	**0**
PED CLEAR	0	**14**	0	**18**	**0**	**0**	**0**	**0**
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**ON**	**ON**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**	**OFF**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4) 1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	**2**	**2**	**2**
RING 2 PHASE	**6**	**6**	**6**
INTERVAL	**2**	**1**	**2**

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

18-May-2012

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Edward St./ Murray Dr.**

Weekly Plan : **Yonge at Ed/ Murray**

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: **Yonge at Ed/ Murray**

Default Weekly Schedule : **Yonge at Ed/ Murray**

Date	Schedule (If blank, use the default weekly schedule)

11-Jun-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

Intersection Name : Yonge St. (Town of Aurora) - Edward St./ Murray Dr.

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	11 41 11 37 00 52 00 48	92	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	11 40 12 37 00 51 00 49	60	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	12 39 12 37 00 51 00 49	80	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

PEEK TRAFFIC

INTERSECTION NAME: **Yonge @ Murray**
PROGRAMMED BY: T. Hanrahan
CONTOLLER SERIAL #:

CTCS #: 639
ADDRESS:
SECURITY CODE: **1000**
PROGRAM DATE: December 20, 2011
INSTALLATION DATE:

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**N/B LT**	**5 -**	**Not Used**
2 -	**Southbound**	**6 -**	**Northbound**
3 -	**E/B LT**	**7 -**	**Not Used**
4 -	**Westbound**	**8 -**	**Eastbound**

PHASE TIMINGS (MM-2-2-2)

	1	2	3	4	5	6	7	8
MIN GREEN	**7**	**40**	**7**	**10**	**0**	**40**	**0**	**10**
PASSAGE	**2.0**	**4.0**	**2.0**	**3.0**	**0**	**4.0**	**0**	**3.0**
YELLOW	**3.0**	**4.5**	**3.0**	**4.0**	**0**	**4.5**	**0**	**4.0**
RED	**0.0**	**2.0**	**0.0**	**2.0**	**0**	**2.0**	**0**	**2.0**
MAX I	**9**	**40**	**9**	**30**	**0**	**40**	**0**	**30**
MAX II	**20**	**40**	**20**	**50**	**0**	**40**	**0**	**50**
WALK	0	**7**	0	**7**	**0**	**7**	**0**	**7**
PED CLEAR	0	**18**	0	**23**	**0**	**18**	**0**	**23**
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**ON**	**ON**	**ON**	**ON**	**OFF**	**OFF**	**OFF**	**OFF**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4) 1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	**2**	**2**	**2**
RING 2 PHASE	**6**	**6**	**6**
INTERVAL	**2**	**1**	**2**

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

11-Jun-2012

Regional Municipality of York
Centralized Traffic Control System
Timing Pattern Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Allaura Blvd./ Henderson Dr.**

Pattern Name	Mode	Cycle	Splits (sec)	offset	Max Green	Omits	Veh. Recall	Ped.Omits	Ped. Recalls	Spec. O/P
AM Peak	TBC	100	12 36 00 52 00 48 14 38	24	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Free Plan	Free	0	00 00 00 00 00 00 00 00	0	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
Off Peak	TBC	100	12 39 00 49 00 51 11 38	95	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********
PM Peak	TBC	100	17 34 00 49 00 51 11 38	83	11111111	NNNNNNNN	XXXXXXXX	NNNN	NNNN	********

18-May-2012

Regional Municipality of York
Centralized Traffic Control System
Controller Scheduler Summary Report - Intersection

Intersection Name : **Yonge St. (Town of Aurora) - Allaura Blvd./ Henderson Dr.**

Weekly Plan : **Yonge at Henderson**

Time of Day	Timing Pattern	MON	TUE	WED	THU	FRI	SAT	SUN
06:00	AM Peak	X	X	X	X	X	-	-
09:30	Off Peak	X	X	X	X	X	X	X
15:00	PM Peak	X	X	X	X	X	-	-
17:00	Free Plan	-	-	-	-	-	X	X
21:00	Free Plan	X	X	X	X	X	-	-

Annual Calendar: **Yonge at Henderson**

Default Weekly Schedule : **Yonge at Henderson**

Date	Schedule (If blank, use the default weekly schedule)

PEEK TRAFFIC

INTERSECTION NAME:	**Yonge @ Henderson**
PROGRAMMED BY:	T. Hanrahan
CONTOLLER SERIAL #:	
CTCS #:	
ADDRESS:	
SECURITY CODE:	**1000**
PROGRAM DATE:	January 9, 2007
INSTALLATION DATE:	

MEMORY/RECALL/CNA (MM-2-2-1)

	1	2	3	4	5	6	7	8
MEMORY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
EXT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MAX RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
PED RECALL	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA I	OFF	**ON**	OFF	OFF	OFF	**ON**	OFF	OFF
CNA II	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FL WALK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SOFT RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
WALK REST	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
COND PED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FWTPCL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1 -	**NBLT**	5 -	**Not Used**
2 -	**Southbound**	6 -	**Northbound**
3 -	**Not Used**	7 -	**EBLT**
4 -	**Eastbound**	8 -	**Westbound**

PHASE TIMINGS (MM-2-2-2)

Revised Dec 20/11 DR

	1	2	3	4	5	6	7	8
MIN GREEN	7	20	0	10	0	20	7	10
PASSAGE	2.0	0.0	0	3.0	0	0.0	2.0	3.0
YELLOW	3.0	4.5	0	4.0	0	4.5	3.0	4.0
RED	0.0	2.0	0	2.0	0	2.0	0.0	2.0
MAX I	9	52	0	30	0	52	9	30
MAX II	20	52	0	50	0	52	20	50
WALK	0	7~~10~~	0	7~~0~~	0	7~~10~~	0	~~14~~ 7
PED CLEAR	0	17~~10~~	0	240	0	17~~10~~	0	1~~5~~24
S/A	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
MIN GAP	0	0	0	0	0	0	0	0
MAX VI	0	0	0	0	0	0	0	0
MAX EXT	0	0	0	0	0	0	0	0
AUTO MAX	0	0	0	0	0	0	0	0
AMR	0	0	0	0	0	0	0	0

Range: 0-9.9 or 127 except max times and auto max which are 0 -255 secs.

PHASES USED (MM-2-2-3-1)

PHASE	1	2	3	4	5	6	7	8
ON/OFF	**ON**	**ON**	**OFF**	**ON**	**OFF**	**ON**	**ON**	**ON**

SEQUENCE (MM-2-2-3-2)

2	1=Sequential, 2= Dual Ring, 3-7= Spec, 8=Lead/Lag

LEAD/LAG MODES (MM-2-2-3-2-PGDN....only if Seq = Lead/Lag)

PAIRS	1 AND 2	3 AND 4	5 AND 6	7 AND 8
CODE				

Codes: 1 = No Reversal, 2 = Always Reverse, 3 = Rev. by CSO or Clock

LEAD/LAG BARRIERS (MM-2-2-3-2-PGDN-PGDN...only if lead/lag

LEAD/LAG BARRIERS ARE:		ON/OFF

On = Barriers after each ring 1 and 2 phase pair in a vertical column

SPECIAL INCOMPATIBILITIES (MM-2-2-3-3)

PHASE	1	2	3	4	5	6	7	8
INCOMPAT PH 1-8								
INCOMPAT PH 1-8								

INITILAIZE / FLASH (MM-2-2-4)

1 =RED, 2 = YEL., 3 = GRN

	INITILIZE	ENTER FL	EXIT FL
RING 1 PHASE	2	2	2
RING 2 PHASE	6	6	6
INTERVAL	2	1	2

NOTE: Enter flash interval is permanently set to 1 (RED)

POWER-UP RESTART TIMINGS (MM-2-2-4-PGDN)

MINIMUM FLASH		(0-9.9 or 127 SECONDS)
1ST ALL RED AFTER FLASH		(0-9.9 or 127 SECONDS)

NOTE: Blanks = 0, OFF, or controller default values

HCM Signalized Intersection Capacity Analysis
1: Yonge St & Henderson Dr/Allaura Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	163	163	205	50	75	65	77	424	90	70	578	92
Future Volume (vph)	163	163	205	50	75	65	77	424	90	70	578	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1764	1883	1603	1815	1696		1801	3510	1528	1810	3510	1532
Flt Permitted	0.43	1.00	1.00	0.64	1.00		0.34	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	789	1883	1603	1229	1696		643	3510	1528	899	3510	1532
Peak-hour factor, PHF	0.90	0.90	0.90	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.87
Adj. Flow (vph)	181	181	228	59	88	76	90	493	105	80	664	106
RTOR Reduction (vph)	0	0	166	0	40	0	0	0	41	0	0	51
Lane Group Flow (vph)	181	181	62	59	124	0	90	493	64	80	664	55
Confl. Peds. (#/hr)	16		7	7		16	16		8	8		16
Heavy Vehicles (%)	3%	2%	0%	0%	5%	3%	1%	4%	3%	0%	4%	1%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		1	6			2	
Permitted Phases	4		4	8			6		6	2		2
Actuated Green, G (s)	27.0	27.0	27.0	13.3	13.3		60.5	60.5	60.5	51.5	51.5	51.5
Effective Green, g (s)	27.0	27.0	27.0	13.3	13.3		60.5	60.5	60.5	51.5	51.5	51.5
Actuated g/C Ratio	0.27	0.27	0.27	0.13	0.13		0.60	0.60	0.60	0.52	0.52	0.52
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	508	432	163	225		458	2123	924	462	1807	788
v/s Ratio Prot	c0.06	0.10			0.07		0.01	c0.14			c0.19	
v/s Ratio Perm	c0.09		0.04	0.05			0.11		0.04	0.09		0.04
v/c Ratio	0.57	0.36	0.14	0.36	0.55		0.20	0.23	0.07	0.17	0.37	0.07
Uniform Delay, d1	29.9	29.5	27.7	39.5	40.6		8.6	9.1	8.1	12.9	14.5	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.43	0.44	0.06
Incremental Delay, d2	2.5	0.4	0.2	1.4	2.9		0.2	0.3	0.1	0.8	0.6	0.2
Delay (s)	32.4	29.9	27.9	40.9	43.5		8.8	9.3	8.3	6.4	7.0	0.9
Level of Service	C	C	C	D	D		A	A	A	A	A	A
Approach Delay (s)		29.9			42.8			9.1			6.1	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

2: Yonge St & Murray Dr/Edward St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	102	136	100	39	86	38	88	496	73	63	597	44
Future Volume (vph)	102	136	100	39	86	38	88	496	73	63	597	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1820	1865	1585	1619	1830	1602	1672	3544	1517	1813	3544	1517
Flt Permitted	0.53	1.00	1.00	0.65	1.00	1.00	0.36	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	1014	1865	1585	1105	1830	1602	629	3544	1517	875	3544	1517
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	129	172	127	41	91	40	93	522	77	69	656	48
RTOR Reduction (vph)	0	0	100	0	0	36	0	0	26	0	0	21
Lane Group Flow (vph)	129	172	27	41	91	4	93	522	51	69	656	27
Confl. Peds. (#/hr)	7		8	8		7	7		7	7		7
Heavy Vehicles (%)	0%	3%	1%	12%	5%	0%	9%	3%	4%	0%	3%	4%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	21.4	21.4	21.4	9.4	9.4	9.4	66.1	66.1	66.1	57.1	57.1	57.1
Effective Green, g (s)	21.4	21.4	21.4	9.4	9.4	9.4	66.1	66.1	66.1	57.1	57.1	57.1
Actuated g/C Ratio	0.21	0.21	0.21	0.09	0.09	0.09	0.66	0.66	0.66	0.57	0.57	0.57
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	289	399	339	103	172	150	478	2342	1002	499	2023	866
v/s Ratio Prot	c0.04	0.09			0.05		0.01	c0.15			c0.19	
v/s Ratio Perm	c0.06		0.02	0.04		0.00	0.12		0.03	0.08		0.02
v/c Ratio	0.45	0.43	0.08	0.40	0.53	0.03	0.19	0.22	0.05	0.14	0.32	0.03
Uniform Delay, d1	33.3	34.0	31.4	42.6	43.2	41.1	6.3	6.7	5.9	10.0	11.3	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.65	0.22	0.47	0.45	0.11
Incremental Delay, d2	1.1	0.7	0.1	2.5	2.9	0.1	0.2	0.2	0.1	0.6	0.4	0.1
Delay (s)	34.4	34.8	31.5	45.2	46.1	41.2	4.4	4.6	1.4	5.2	5.5	1.1
Level of Service	C	C	C	D	D	D	A	A	A	A	A	A
Approach Delay (s)		33.7			44.7			4.2			5.2	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Yonge St & Brookland Ave/Private Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	30	5	26	13	3	2	15	571	29	3	690	16
Future Volume (vph)	30	5	26	13	3	2	15	571	29	3	690	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		0.99		0.99	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.96	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1834	1492		1715		1599	3517		1816	3526	
Flt Permitted		0.73	1.00		0.78		0.36	1.00		0.41	1.00	
Satd. Flow (perm)		1402	1492		1378		603	3517		788	3526	
Peak-hour factor, PHF	0.76	0.76	0.76	0.50	0.50	0.50	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	39	7	34	26	6	4	16	601	31	3	742	17
RTOR Reduction (vph)	0	0	29	0	3	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	46	5	0	33	0	16	630	0	3	758	0
Confl. Peds. (#/hr)	5		9	9		5	12		5	5		12
Heavy Vehicles (%)	0%	0%	7%	0%	33%	0%	13%	3%	0%	0%	3%	6%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.3	14.3		14.3		73.2	73.2		73.2	73.2	
Effective Green, g (s)		14.3	14.3		14.3		73.2	73.2		73.2	73.2	
Actuated g/C Ratio		0.14	0.14		0.14		0.73	0.73		0.73	0.73	
Clearance Time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		200	213		197		441	2574		576	2581	
v/s Ratio Prot								0.18			c0.21	
v/s Ratio Perm		c0.03	0.00		0.02		0.03			0.00		
v/c Ratio		0.23	0.02		0.17		0.04	0.24		0.01	0.29	
Uniform Delay, d1		38.0	36.8		37.6		3.7	4.4		3.6	4.6	
Progression Factor		1.00	1.00		1.00		1.05	1.17		0.66	0.53	
Incremental Delay, d2		0.6	0.0		0.4		0.2	0.2		0.0	0.3	
Delay (s)		38.6	36.9		38.0		4.0	5.3		2.4	2.7	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		37.8			38.0			5.3			2.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Yonge St & Golf Links Dr/Dunning Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	45	81	42	51	50	39	70	464	74	56	639	35
Future Volume (vph)	45	81	42	51	50	39	70	464	74	56	639	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.97	1.00		0.97	1.00		0.94	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1772	1691		1772	1743		1768	3406		1710	3493	
Flt Permitted	0.67	1.00		0.53	1.00		0.37	1.00		0.45	1.00	
Satd. Flow (perm)	1251	1691		986	1743		687	3406		804	3493	
Peak-hour factor, PHF	0.74	0.74	0.74	0.73	0.73	0.73	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	61	109	57	70	68	53	71	473	76	61	695	38
RTOR Reduction (vph)	0	24	0	0	35	0	0	8	0	0	2	0
Lane Group Flow (vph)	61	142	0	70	86	0	71	541	0	61	731	0
Confl. Peds. (#/hr)	29		32	32		29	37		57	57		37
Heavy Vehicles (%)	0%	9%	0%	0%	0%	2%	0%	3%	1%	0%	3%	5%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.3	14.3		14.3	14.3		73.2	73.2		73.2	73.2	
Effective Green, g (s)	14.3	14.3		14.3	14.3		73.2	73.2		73.2	73.2	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.73	0.73		0.73	0.73	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	241		140	249		502	2493		588	2556	
v/s Ratio Prot		c0.08			0.05			0.16			c0.21	
v/s Ratio Perm	0.05			0.07			0.10			0.08		
v/c Ratio	0.34	0.59		0.50	0.34		0.14	0.22		0.10	0.29	
Uniform Delay, d1	38.6	40.1		39.6	38.6		4.0	4.3		3.9	4.5	
Progression Factor	1.00	1.00		1.00	1.00		0.43	0.38		1.42	1.48	
Incremental Delay, d2	1.2	3.7		2.8	0.8		0.6	0.2		0.3	0.3	
Delay (s)	39.8	43.8		42.3	39.5		2.3	1.8		5.8	7.0	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		42.7			40.5			1.9			6.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

5: Yonge St & Kennedy St W/Kennedy St E

2018 Existing AM

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Traffic Volume (vph)	6	8	34	46	3	13	14	496	25	20	672	5
Future Volume (vph)	6	8	34	46	3	13	14	496	25	20	672	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			0.99			1.00			1.00	
Frt		0.90			0.97			0.99			1.00	
Flt Protected		0.99			0.96			1.00			1.00	
Satd. Flow (prot)		1701			1784			3515			3527	
Flt Permitted		0.96			0.80			0.93			0.93	
Satd. Flow (perm)		1638			1486			3271			3277	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.95	0.95	0.95
Adj. Flow (vph)	7	9	40	53	3	15	16	577	29	21	707	5
RTOR Reduction (vph)	0	36	0	0	13	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	20	0	0	58	0	0	620	0	0	733	0
Confl. Peds. (#/hr)	2		5	5		2	10		6	6		10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	3%	40%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.1			9.1			78.4			78.4	
Effective Green, g (s)		9.1			9.1			78.4			78.4	
Actuated g/C Ratio		0.09			0.09			0.78			0.78	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		149			135			2564			2569	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.04			0.19			c0.22	
v/c Ratio		0.13			0.43			0.24			0.29	
Uniform Delay, d1		41.8			43.0			2.9			3.0	
Progression Factor		1.00			1.00			1.68			1.00	
Incremental Delay, d2		0.4			2.2			0.2			0.3	
Delay (s)		42.2			45.2			5.1			3.3	
Level of Service		D			D			A			A	
Approach Delay (s)		42.2			45.2			5.1			3.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑	↱		↰↑↱			↰↑↱	
Traffic Volume (vph)	103	521	112	60	353	96	37	342	65	96	509	133
Future Volume (vph)	103	521	112	60	353	96	37	342	65	96	509	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0	6.0		6.0			6.0	
Lane Util. Factor		0.95			0.95	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.94		0.99			0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.98			0.97	
Flt Protected		0.99			0.99	1.00		1.00			0.99	
Satd. Flow (prot)		3207			3245	1388		3212			3215	
Flt Permitted		0.76			0.65	1.00		0.82			0.76	
Satd. Flow (perm)		2457			2125	1388		2636			2446	
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	120	606	130	62	368	100	42	389	74	105	559	146
RTOR Reduction (vph)	0	13	0	0	0	58	0	9	0	0	14	0
Lane Group Flow (vph)	0	843	0	0	431	42	0	496	0	0	796	0
Confl. Peds. (#/hr)	30		11	11		30	22		25	25		22
Heavy Vehicles (%)	4%	4%	3%	10%	5%	5%	8%	3%	7%	2%	3%	3%
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			6		5	2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)		50.0			50.0	50.0		58.0			58.0	
Effective Green, g (s)		50.0			50.0	50.0		58.0			58.0	
Actuated g/C Ratio		0.42			0.42	0.42		0.48			0.48	
Clearance Time (s)		6.0			6.0	6.0		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		1023			885	578		1274			1182	
v/s Ratio Prot												
v/s Ratio Perm		c0.34			0.20	0.03		0.19			c0.33	
v/c Ratio		0.82			0.49	0.07		0.39			0.67	
Uniform Delay, d1		31.1			25.6	21.0		19.7			23.7	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		5.5			0.4	0.1		0.9			1.5	
Delay (s)		36.6			26.0	21.1		20.6			25.3	
Level of Service		D			C	C		C			C	
Approach Delay (s)		36.6			25.1			20.6			25.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	70	71	90	44	66	34	68	430	50	33	591	65
Future Volume (vph)	70	71	90	44	66	34	68	430	50	33	591	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1783	1697		1631	1670		1788	3471		1757	3488	
Flt Permitted	0.68	1.00		0.42	1.00		0.34	1.00		0.45	1.00	
Satd. Flow (perm)	1272	1697		721	1670		635	3471		839	3488	
Peak-hour factor, PHF	0.80	0.80	0.80	0.84	0.84	0.84	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	88	89	112	52	79	40	76	478	56	37	664	73
RTOR Reduction (vph)	0	54	0	0	21	0	0	6	0	0	6	0
Lane Group Flow (vph)	88	148	0	52	98	0	76	528	0	37	731	0
Confl. Peds. (#/hr)	3		9	9		3	4		7	7		4
Heavy Vehicles (%)	2%	4%	1%	11%	12%	2%	2%	3%	4%	3%	3%	1%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	14.4	14.4		14.4	14.4		73.1	73.1		64.5	64.5	
Effective Green, g (s)	14.4	14.4		14.4	14.4		73.1	73.1		64.5	64.5	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.73	0.73		0.64	0.64	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	183	244		103	240		528	2537		541	2249	
v/s Ratio Prot		c0.09			0.06		0.01	c0.15			c0.21	
v/s Ratio Perm	0.07			0.07			0.10			0.04		
v/c Ratio	0.48	0.61		0.50	0.41		0.14	0.21		0.07	0.33	
Uniform Delay, d1	39.4	40.1		39.5	38.9		4.0	4.3		6.6	8.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.56	0.70	
Incremental Delay, d2	2.0	4.2		3.9	1.1		0.1	0.2		0.2	0.4	
Delay (s)	41.4	44.4		43.4	40.0		4.1	4.5		3.9	6.0	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		43.5			41.1			4.4			5.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	119	59	72	60	47	59	74	410	39	40	563	66
Future Volume (vph)	119	59	72	60	47	59	74	410	39	40	563	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.92		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1764	1645		1805	1585		1752	3498		1780	3472	
Flt Permitted	0.67	1.00		0.58	1.00		0.36	1.00		0.46	1.00	
Satd. Flow (perm)	1248	1645		1093	1585		660	3498		870	3472	
Peak-hour factor, PHF	0.82	0.82	0.82	0.86	0.86	0.86	0.88	0.88	0.88	0.93	0.93	0.93
Adj. Flow (vph)	145	72	88	70	55	69	84	466	44	43	605	71
RTOR Reduction (vph)	0	53	0	0	54	0	0	5	0	0	6	0
Lane Group Flow (vph)	145	107	0	70	70	0	84	505	0	43	670	0
Confl. Peds. (#/hr)	5		14	14		5	7		5	5		7
Heavy Vehicles (%)	3%	10%	2%	0%	10%	10%	4%	3%	0%	2%	3%	4%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	17.1	17.1		17.1	17.1		70.4	70.4		61.4	61.4	
Effective Green, g (s)	17.1	17.1		17.1	17.1		70.4	70.4		61.4	61.4	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.70	0.70		0.61	0.61	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	213	281		186	271		530	2462		534	2131	
v/s Ratio Prot		0.07			0.04		0.01	c0.14			c0.19	
v/s Ratio Perm	c0.12			0.06			0.10			0.05		
v/c Ratio	0.68	0.38		0.38	0.26		0.16	0.21		0.08	0.31	
Uniform Delay, d1	38.9	36.8		36.7	36.0		4.8	5.1		7.8	9.2	
Progression Factor	1.00	1.00		1.00	1.00		1.10	1.35		1.00	1.00	
Incremental Delay, d2	8.6	0.9		1.3	0.5		0.1	0.2		0.3	0.4	
Delay (s)	47.5	37.6		38.0	36.5		5.4	7.1		8.1	9.6	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		42.3			37.0			6.9			9.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Yonge St & Henderson Dr/Allaura Blvd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	171	130	98	61	111	90	130	522	75	89	516	198
Future Volume (vph)	171	130	98	61	111	90	130	522	75	89	516	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1820	1847	1556	1762	1734		1764	3202	1543	1812	3067	1502
Flt Permitted	0.34	1.00	1.00	0.67	1.00		0.38	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	644	1847	1556	1234	1734		697	3202	1543	821	3067	1502
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	190	144	109	67	122	99	146	587	84	100	580	222
RTOR Reduction (vph)	0	0	79	0	36	0	0	0	33	0	0	113
Lane Group Flow (vph)	190	144	30	67	185	0	146	587	51	100	580	109
Confl. Peds. (#/hr)	15		7	7		15	16		8	8		16
Heavy Vehicles (%)	0%	4%	3%	3%	3%	1%	3%	14%	2%	0%	19%	3%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		1	6			2	
Permitted Phases	4		4	8			6		6	2		2
Actuated Green, G (s)	27.1	27.1	27.1	16.1	16.1		60.4	60.4	60.4	48.9	48.9	48.9
Effective Green, g (s)	27.1	27.1	27.1	16.1	16.1		60.4	60.4	60.4	48.9	48.9	48.9
Actuated g/C Ratio	0.27	0.27	0.27	0.16	0.16		0.60	0.60	0.60	0.49	0.49	0.49
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	268	500	421	198	279		511	1934	931	401	1499	734
v/s Ratio Prot	c0.06	0.08			0.11		0.02	c0.18			c0.19	
v/s Ratio Perm	c0.14		0.02	0.05			0.15		0.03	0.12		0.07
v/c Ratio	0.71	0.29	0.07	0.34	0.66		0.29	0.30	0.05	0.25	0.39	0.15
Uniform Delay, d1	30.6	28.8	27.1	37.2	39.4		8.8	9.6	8.1	14.9	16.1	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.74	0.80	0.97
Incremental Delay, d2	8.3	0.3	0.1	1.0	5.8		0.3	0.4	0.1	1.4	0.7	0.4
Delay (s)	38.9	29.1	27.2	38.2	45.2		9.2	10.0	8.2	12.4	13.6	14.0
Level of Service	D	C	C	D	D		A	B	A	B	B	B
Approach Delay (s)		32.8			43.6			9.7			13.6	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	133	142	116	108	145	64	117	583	39	74	582	106
Future Volume (vph)	133	142	116	108	145	64	117	583	39	74	582	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1821	1883	1569	1760	1902	1601	1767	3288	1571	1741	3120	1562
Flt Permitted	0.45	1.00	1.00	0.66	1.00	1.00	0.36	1.00	1.00	0.42	1.00	1.00
Satd. Flow (perm)	863	1883	1569	1228	1902	1601	664	3288	1571	778	3120	1562
Peak-hour factor, PHF	0.96	0.96	0.96	0.85	0.85	0.85	0.97	0.97	0.97	0.95	0.95	0.95
Adj. Flow (vph)	139	148	121	127	171	75	121	601	40	78	613	112
RTOR Reduction (vph)	0	0	87	0	0	63	0	0	16	0	0	50
Lane Group Flow (vph)	139	148	34	127	171	12	121	601	24	78	613	62
Confl. Peds. (#/hr)	8		8	8		8	12		9	9		12
Heavy Vehicles (%)	0%	2%	2%	3%	1%	0%	3%	11%	0%	4%	17%	0%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	27.8	27.8	27.8	16.0	16.0	16.0	59.7	59.7	59.7	48.7	48.7	48.7
Effective Green, g (s)	27.8	27.8	27.8	16.0	16.0	16.0	59.7	59.7	59.7	48.7	48.7	48.7
Actuated g/C Ratio	0.28	0.28	0.28	0.16	0.16	0.16	0.60	0.60	0.60	0.49	0.49	0.49
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	324	523	436	196	304	256	484	1962	937	378	1519	760
v/s Ratio Prot	c0.04	0.08			0.09		0.02	c0.18			c0.20	
v/s Ratio Perm	0.08		0.02	c0.10		0.01	0.13		0.02	0.10		0.04
v/c Ratio	0.43	0.28	0.08	0.65	0.56	0.05	0.25	0.31	0.03	0.21	0.40	0.08
Uniform Delay, d1	28.4	28.3	26.6	39.4	38.8	35.5	9.1	9.9	8.2	14.6	16.4	13.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.49	1.45	5.35	0.72	0.72	0.45
Incremental Delay, d2	0.9	0.3	0.1	7.2	2.4	0.1	0.3	0.4	0.0	1.2	0.8	0.2
Delay (s)	29.3	28.6	26.7	46.5	41.1	35.6	13.8	14.8	44.1	11.7	12.6	6.4
Level of Service	C	C	C	D	D	D	B	B	D	B	B	A
Approach Delay (s)		28.3			41.9			16.1			11.6	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	48	4	47	33	5	18	39	705	47	6	700	47
Future Volume (vph)	48	4	47	33	5	18	39	705	47	6	700	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		0.99		0.98	1.00		0.99	1.00	
Frt		1.00	0.85		0.96		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1834	1582		1770		1792	3265		1800	3028	
Flt Permitted		0.77	1.00		0.79		0.35	1.00		0.35	1.00	
Satd. Flow (perm)		1478	1582		1432		666	3265		659	3028	
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	52	4	51	38	6	20	41	742	49	6	729	49
RTOR Reduction (vph)	0	0	45	0	18	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	56	6	0	47	0	41	788	0	6	775	0
Confl. Peds. (#/hr)	1		8	8		1	23		18	18		23
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	11%	0%	0%	20%	2%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		12.5	12.5		12.5		75.0	75.0		75.0	75.0	
Effective Green, g (s)		12.5	12.5		12.5		75.0	75.0		75.0	75.0	
Actuated g/C Ratio		0.12	0.12		0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		184	197		179		499	2448		494	2271	
v/s Ratio Prot								0.24			c0.26	
v/s Ratio Perm		c0.04	0.00		0.03		0.06			0.01		
v/c Ratio		0.30	0.03		0.26		0.08	0.32		0.01	0.34	
Uniform Delay, d1		39.8	38.4		39.6		3.3	4.1		3.2	4.2	
Progression Factor		1.00	1.00		1.00		0.74	0.65		0.70	0.63	
Incremental Delay, d2		0.9	0.1		0.8		0.3	0.3		0.0	0.4	
Delay (s)		40.7	38.5		40.3		2.8	3.0		2.3	3.0	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		39.7			40.3			3.0			3.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

4: Yonge St & Golf Links Dr/Dunning Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	33	30	34	65	47	62	70	650	34	61	645	33
Future Volume (vph)	33	30	34	65	47	62	70	650	34	61	645	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.97	1.00		0.96	1.00		0.96	1.00	
Frt	1.00	0.92		1.00	0.91		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1742	1719		1752	1651		1722	3176		1740	3051	
Flt Permitted	0.61	1.00		0.71	1.00		0.38	1.00		0.37	1.00	
Satd. Flow (perm)	1122	1719		1305	1651		695	3176		685	3051	
Peak-hour factor, PHF	0.84	0.84	0.84	0.81	0.81	0.81	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	39	36	40	80	58	77	74	691	36	64	672	34
RTOR Reduction (vph)	0	35	0	0	60	0	0	2	0	0	2	0
Lane Group Flow (vph)	39	41	0	80	76	0	74	725	0	64	704	0
Confl. Peds. (#/hr)	27		28	28		27	42		43	43		42
Heavy Vehicles (%)	2%	1%	0%	1%	6%	2%	2%	14%	2%	1%	19%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.5	12.5		12.5	12.5		75.0	75.0		75.0	75.0	
Effective Green, g (s)	12.5	12.5		12.5	12.5		75.0	75.0		75.0	75.0	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	140	214		163	206		521	2382		513	2288	
v/s Ratio Prot		0.02			0.05			0.23			c0.23	
v/s Ratio Perm	0.03			c0.06			0.11			0.09		
v/c Ratio	0.28	0.19		0.49	0.37		0.14	0.30		0.12	0.31	
Uniform Delay, d1	39.7	39.2		40.8	40.1		3.5	4.0		3.4	4.1	
Progression Factor	1.00	1.00		1.00	1.00		0.74	0.73		0.87	0.85	
Incremental Delay, d2	1.1	0.4		2.3	1.1		0.6	0.3		0.5	0.3	
Delay (s)	40.8	39.7		43.1	41.2		3.1	3.3		3.5	3.8	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		40.0			41.9			3.3			3.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑↑↱			↰↑↑↱	
Traffic Volume (vph)	7	9	46	63	8	23	24	677	35	21	627	13
Future Volume (vph)	7	9	46	63	8	23	24	677	35	21	627	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.98			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			0.99			1.00			1.00	
Frt		0.90			0.97			0.99			1.00	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1691			1774			3066			3098	
Flt Permitted		0.96			0.79			0.92			0.92	
Satd. Flow (perm)		1638			1453			2815			2842	
Peak-hour factor, PHF	0.78	0.78	0.78	0.81	0.81	0.81	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	9	12	59	78	10	28	24	691	36	23	682	14
RTOR Reduction (vph)	0	51	0	0	14	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	29	0	0	102	0	0	749	0	0	718	0
Confl. Peds. (#/hr)	3		6	6		3	14		16	16		14
Heavy Vehicles (%)	0%	1%	0%	0%	2%	1%	2%	19%	1%	0%	18%	1%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.4			13.4			74.1			74.1	
Effective Green, g (s)		13.4			13.4			74.1			74.1	
Actuated g/C Ratio		0.13			0.13			0.74			0.74	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		219			194			2085			2105	
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.07			c0.27			0.25	
v/c Ratio		0.13			0.53			0.36			0.34	
Uniform Delay, d1		38.2			40.3			4.6			4.5	
Progression Factor		1.00			1.00			1.40			1.00	
Incremental Delay, d2		0.3			2.6			0.5			0.4	
Delay (s)		38.4			42.9			6.9			4.9	
Level of Service		D			D			A			A	
Approach Delay (s)		38.4			42.9			6.9			4.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Yonge St & Wellington St W/Wellington St E

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑	↱		↰↑↱			↰↑↱	
Traffic Volume (vph)	120	369	86	91	366	167	44	484	70	123	466	137
Future Volume (vph)	120	369	86	91	366	167	44	484	70	123	466	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0	6.0		6.0			6.0	
Lane Util. Factor		0.95			0.95	1.00		0.95			0.95	
Frpb, ped/bikes		0.99			1.00	0.89		0.99			0.98	
Flpb, ped/bikes		0.99			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.98			0.97	
Flt Protected		0.99			0.99	1.00		1.00			0.99	
Satd. Flow (prot)		3037			3060	1274		3047			2895	
Flt Permitted		0.66			0.64	1.00		0.84			0.68	
Satd. Flow (perm)		2026			1964	1274		2556			1995	
Peak-hour factor, PHF	0.98	0.98	0.98	0.87	0.87	0.87	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	122	377	88	105	421	192	47	515	74	129	491	144
RTOR Reduction (vph)	0	14	0	0	0	87	0	7	0	0	17	0
Lane Group Flow (vph)	0	573	0	0	526	105	0	629	0	0	747	0
Confl. Peds. (#/hr)	70		24	24		70	51		39	39		51
Heavy Vehicles (%)	3%	12%	1%	2%	14%	8%	0%	12%	3%	5%	17%	6%
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			6		5	2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)		37.1			37.1	37.1		60.9			60.9	
Effective Green, g (s)		37.1			37.1	37.1		60.9			60.9	
Actuated g/C Ratio		0.34			0.34	0.34		0.55			0.55	
Clearance Time (s)		6.0			6.0	6.0		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		683			662	429		1415			1104	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.27	0.08		0.25			c0.37	
v/c Ratio		0.84			0.79	0.24		0.44			0.68	
Uniform Delay, d1		33.7			33.0	26.3		14.5			17.5	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		8.9			6.5	0.3		1.0			1.7	
Delay (s)		42.6			39.5	26.6		15.5			19.2	
Level of Service		D			D	C		B			B	
Approach Delay (s)		42.6			36.1			15.5			19.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	96	49	68	23	48	31	110	704	39	34	611	79
Future Volume (vph)	96	49	68	23	48	31	110	704	39	34	611	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.98	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.91		1.00	0.94		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1794	1714		1797	1775		1821	2967		1814	3170	
Flt Permitted	0.70	1.00		0.65	1.00		0.32	1.00		0.33	1.00	
Satd. Flow (perm)	1317	1714		1234	1775		618	2967		632	3170	
Peak-hour factor, PHF	0.93	0.93	0.93	0.85	0.85	0.85	0.87	0.87	0.87	0.90	0.90	0.90
Adj. Flow (vph)	103	53	73	27	56	36	126	809	45	38	679	88
RTOR Reduction (vph)	0	62	0	0	29	0	0	2	0	0	7	0
Lane Group Flow (vph)	103	64	0	27	63	0	126	852	0	38	760	0
Confl. Peds. (#/hr)	15		14	14		15	12		8	8		12
Heavy Vehicles (%)	0%	0%	1%	0%	1%	0%	0%	23%	0%	0%	14%	1%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	13.8	13.8		13.8	13.8		73.7	73.7		63.4	63.4	
Effective Green, g (s)	13.8	13.8		13.8	13.8		73.7	73.7		63.4	63.4	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.74	0.74		0.63	0.63	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	236		170	244		543	2186		400	2009	
v/s Ratio Prot		0.04			0.04		0.02	c0.29			0.24	
v/s Ratio Perm	c0.08			0.02			0.15			0.06		
v/c Ratio	0.57	0.27		0.16	0.26		0.23	0.39		0.10	0.38	
Uniform Delay, d1	40.3	38.6		38.0	38.5		4.0	4.9		7.1	8.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.32	0.40	
Incremental Delay, d2	4.1	0.6		0.4	0.6		0.2	0.5		0.4	0.5	
Delay (s)	44.4	39.2		38.4	39.1		4.2	5.4		2.7	4.1	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		41.5			38.9			5.2			4.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

8: Yonge St & Orchard Heights Blvd/Batson Dr

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	169	40	127	29	40	27	147	617	38	19	571	95
Future Volume (vph)	169	40	127	29	40	27	147	617	38	19	571	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.94		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1799	1666		1805	1787		1736	3038		1817	3057	
Flt Permitted	0.71	1.00		0.53	1.00		0.33	1.00		0.38	1.00	
Satd. Flow (perm)	1337	1666		1004	1787		610	3038		729	3057	
Peak-hour factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	192	45	144	34	47	31	160	671	41	20	601	100
RTOR Reduction (vph)	0	115	0	0	25	0	0	3	0	0	11	0
Lane Group Flow (vph)	192	74	0	34	53	0	160	709	0	20	690	0
Confl. Peds. (#/hr)	5		15	15		5	7		6	6		7
Heavy Vehicles (%)	1%	0%	0%	0%	0%	1%	5%	20%	1%	0%	19%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	19.8	19.8		19.8	19.8		67.7	67.7		56.0	56.0	
Effective Green, g (s)	19.8	19.8		19.8	19.8		67.7	67.7		56.0	56.0	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.68	0.68		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	264	329		198	353		510	2056		408	1711	
v/s Ratio Prot		0.04			0.03		0.03	c0.23			c0.23	
v/s Ratio Perm	c0.14			0.03			0.18			0.03		
v/c Ratio	0.73	0.22		0.17	0.15		0.31	0.34		0.05	0.40	
Uniform Delay, d1	37.6	33.6		33.3	33.1		6.1	6.8		10.0	12.5	
Progression Factor	1.00	1.00		1.00	1.00		1.04	1.18		1.00	1.00	
Incremental Delay, d2	9.6	0.3		0.4	0.2		0.3	0.4		0.2	0.7	
Delay (s)	47.1	34.0		33.7	33.3		6.7	8.5		10.2	13.2	
Level of Service	D	C		C	C		A	A		B	B	
Approach Delay (s)		40.6			33.5			8.1			13.1	
Approach LOS		D			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	198	112	109	56	157	71	279	665	62	54	546	269
Future Volume (vph)	198	112	109	56	157	71	279	665	62	54	546	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1824	1865	1573	1749	1786		1800	3093	1467	1822	3230	1578
Flt Permitted	0.30	1.00	1.00	0.68	1.00		0.34	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)	568	1865	1573	1253	1786		642	3093	1467	706	3230	1578
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	211	119	116	66	185	84	313	747	70	59	593	292
RTOR Reduction (vph)	0	0	81	0	19	0	0	0	30	0	0	174
Lane Group Flow (vph)	211	119	35	66	250	0	313	747	40	59	593	118
Confl. Peds. (#/hr)	3		16	16		3	18		18	2		2
Heavy Vehicles (%)	0%	3%	1%	3%	3%	0%	1%	18%	5%	0%	13%	1%
Turn Type	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4			8		1	6			2	
Permitted Phases	4		4	8			6		6	2		2
Actuated Green, G (s)	30.3	30.3	30.3	19.3	19.3		57.2	57.2	57.2	40.3	40.3	40.3
Effective Green, g (s)	30.3	30.3	30.3	19.3	19.3		57.2	57.2	57.2	40.3	40.3	40.3
Actuated g/C Ratio	0.30	0.30	0.30	0.19	0.19		0.57	0.57	0.57	0.40	0.40	0.40
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0		3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	272	565	476	241	344		528	1769	839	284	1301	635
v/s Ratio Prot	c0.06	0.06			0.14		c0.08	0.24			0.18	
v/s Ratio Perm	c0.17		0.02	0.05			c0.26		0.03	0.08		0.07
v/c Ratio	0.78	0.21	0.07	0.27	0.73		0.59	0.42	0.05	0.21	0.46	0.19
Uniform Delay, d1	29.4	25.9	24.8	34.4	37.9		11.8	12.1	9.4	19.4	21.8	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.16	1.06	2.13
Incremental Delay, d2	12.9	0.2	0.1	0.6	7.4		1.8	0.7	0.1	1.6	1.1	0.6
Delay (s)	42.4	26.1	24.9	35.0	45.3		13.5	12.8	9.5	24.2	24.2	41.7
Level of Service	D	C	C	C	D		B	B	A	C	C	D
Approach Delay (s)		33.5			43.3			12.8			29.6	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: Yonge St & Murray Dr/Edward St

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (vph)	140	125	162	107	209	56	151	704	43	41	605	76
Future Volume (vph)	140	125	162	107	209	56	151	704	43	41	605	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1807	1812	1589	1818	1830	1633	1822	3147	1578	1809	3202	1543
Flt Permitted	0.35	1.00	1.00	0.67	1.00	1.00	0.34	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	658	1812	1589	1275	1830	1633	647	3147	1578	688	3202	1543
Peak-hour factor, PHF	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	159	142	184	120	235	63	164	765	47	43	630	79
RTOR Reduction (vph)	0	0	128	0	0	51	0	0	20	0	0	43
Lane Group Flow (vph)	159	142	56	120	235	12	164	765	27	43	630	36
Confl. Peds. (#/hr)			5	5			7		7	13		13
Heavy Vehicles (%)	1%	6%	1%	0%	5%	0%	0%	16%	0%	0%	14%	1%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	30.2	30.2	30.2	18.3	18.3	18.3	57.3	57.3	57.3	45.3	45.3	45.3
Effective Green, g (s)	30.2	30.2	30.2	18.3	18.3	18.3	57.3	57.3	57.3	45.3	45.3	45.3
Actuated g/C Ratio	0.30	0.30	0.30	0.18	0.18	0.18	0.57	0.57	0.57	0.45	0.45	0.45
Clearance Time (s)	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	300	547	479	233	334	298	476	1803	904	311	1450	698
v/s Ratio Prot	c0.05	0.08			c0.13		0.03	c0.24			0.20	
v/s Ratio Perm	0.11		0.03	0.09		0.01	0.17		0.02	0.06		0.02
v/c Ratio	0.53	0.26	0.12	0.52	0.70	0.04	0.34	0.42	0.03	0.14	0.43	0.05
Uniform Delay, d1	27.2	26.4	25.2	36.8	38.3	33.6	10.5	12.0	9.3	16.0	18.6	15.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.66	0.25	0.64	0.62	0.11
Incremental Delay, d2	1.8	0.3	0.1	1.9	6.6	0.1	0.4	0.7	0.1	0.9	0.9	0.1
Delay (s)	29.0	26.7	25.4	38.8	44.9	33.7	7.5	8.6	2.4	11.0	12.5	1.8
Level of Service	C	C	C	D	D	C	A	A	A	B	B	A
Approach Delay (s)		26.9			41.4			8.1			11.3	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Yonge St & Brookland Ave/Private Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	40	11	54	38	8	7	52	798	63	9	646	51
Future Volume (vph)	40	11	54	38	8	7	52	798	63	9	646	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes		0.96	1.00		0.99		0.98	1.00		0.98	1.00	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1776	1588		1777		1790	2980		1794	3124	
Flt Permitted		0.78	1.00		0.74		0.35	1.00		0.30	1.00	
Satd. Flow (perm)		1432	1588		1367		665	2980		558	3124	
Peak-hour factor, PHF	0.73	0.73	0.73	0.83	0.83	0.83	0.93	0.93	0.93	0.90	0.90	0.90
Adj. Flow (vph)	55	15	74	46	10	8	56	858	68	10	718	57
RTOR Reduction (vph)	0	0	64	0	6	0	0	4	0	0	4	0
Lane Group Flow (vph)	0	70	10	0	58	0	56	922	0	10	771	0
Confl. Peds. (#/hr)	46		13	13		46	24		24	28		28
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	22%	1%	0%	16%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		13.5	13.5		13.5		74.0	74.0		74.0	74.0	
Effective Green, g (s)		13.5	13.5		13.5		74.0	74.0		74.0	74.0	
Actuated g/C Ratio		0.14	0.14		0.14		0.74	0.74		0.74	0.74	
Clearance Time (s)		6.0	6.0		6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		193	214		184		492	2205		412	2311	
v/s Ratio Prot								c0.31			0.25	
v/s Ratio Perm		c0.05	0.01		0.04		0.08			0.02		
v/c Ratio		0.36	0.05		0.31		0.11	0.42		0.02	0.33	
Uniform Delay, d1		39.3	37.6		39.1		3.7	4.9		3.4	4.5	
Progression Factor		1.00	1.00		1.00		0.71	0.61		0.34	0.29	
Incremental Delay, d2		1.2	0.1		1.0		0.4	0.5		0.1	0.4	
Delay (s)		40.5	37.7		40.1		3.1	3.5		1.3	1.7	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		39.1			40.1			3.5			1.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	19	45	29	46	76	59	52	736	37	32	634	17
Future Volume (vph)	19	45	29	46	76	59	52	736	37	32	634	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00		0.99	1.00	
Frt	1.00	0.94		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1820	1760		1782	1765		1772	3008		1793	3195	
Flt Permitted	0.51	1.00		0.70	1.00		0.38	1.00		0.32	1.00	
Satd. Flow (perm)	985	1760		1315	1765		704	3008		610	3195	
Peak-hour factor, PHF	0.86	0.86	0.86	0.81	0.81	0.81	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	52	34	57	94	73	57	809	41	35	697	19
RTOR Reduction (vph)	0	29	0	0	35	0	0	2	0	0	1	0
Lane Group Flow (vph)	22	57	0	57	132	0	57	848	0	35	715	0
Confl. Peds. (#/hr)	3		4	4		3	22		22	11		11
Heavy Vehicles (%)	0%	2%	2%	2%	1%	1%	1%	21%	1%	1%	14%	1%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.5	13.5		13.5	13.5		74.0	74.0		74.0	74.0	
Effective Green, g (s)	13.5	13.5		13.5	13.5		74.0	74.0		74.0	74.0	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.74	0.74		0.74	0.74	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	132	237		177	238		520	2225		451	2364	
v/s Ratio Prot		0.03			c0.08			c0.28			0.22	
v/s Ratio Perm	0.02			0.04			0.08			0.06		
v/c Ratio	0.17	0.24		0.32	0.56		0.11	0.38		0.08	0.30	
Uniform Delay, d1	38.3	38.7		39.1	40.4		3.7	4.7		3.6	4.4	
Progression Factor	1.00	1.00		1.00	1.00		0.67	0.52		1.89	1.94	
Incremental Delay, d2	0.6	0.5		1.1	2.8		0.4	0.5		0.3	0.3	
Delay (s)	38.9	39.2		40.2	43.3		2.9	2.9		7.1	8.8	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		39.1			42.5			2.9			8.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: Yonge St & Kennedy St W/Kennedy St E

Aurora MTS
2018 Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↑↱			↰↑↑↱	
Traffic Volume (vph)	11	8	36	35	17	19	33	744	15	11	619	6
Future Volume (vph)	11	8	36	35	17	19	33	744	15	11	619	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.97			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			0.98			1.00			1.00	
Frt		0.91			0.96			1.00			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1661			1746			3066			3229	
Flt Permitted		0.93			0.86			0.90			0.94	
Satd. Flow (perm)		1560			1536			2765			3025	
Peak-hour factor, PHF	0.76	0.76	0.76	0.89	0.89	0.89	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	14	11	47	39	19	21	36	818	16	12	659	6
RTOR Reduction (vph)	0	43	0	0	16	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	29	0	0	63	0	0	869	0	0	677	0
Confl. Peds. (#/hr)	20		25	25		20	47		47	25		25
Heavy Vehicles (%)	0%	0%	1%	0%	2%	1%	0%	19%	0%	1%	13%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.1			9.1			78.4			78.4	
Effective Green, g (s)		9.1			9.1			78.4			78.4	
Actuated g/C Ratio		0.09			0.09			0.78			0.78	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		141			139			2167			2371	
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.04			c0.31			0.22	
v/c Ratio		0.21			0.45			0.40			0.29	
Uniform Delay, d1		42.1			43.1			3.4			3.0	
Progression Factor		1.00			1.00			1.02			1.00	
Incremental Delay, d2		0.7			2.3			0.5			0.3	
Delay (s)		42.8			45.4			4.0			3.3	
Level of Service		D			D			A			A	
Approach Delay (s)		42.8			45.4			4.0			3.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Yonge St & Wellington St W/Wellington St E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑	↱		↰↑↱			↰↑↱	
Traffic Volume (vph)	127	417	88	76	463	188	81	676	61	55	456	61
Future Volume (vph)	127	417	88	76	463	188	81	676	61	55	456	61
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0	6.0		6.0			6.0	
Lane Util. Factor		0.95			0.95	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.98		0.99			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.99			0.98	
Flt Protected		0.99			0.99	1.00		1.00			1.00	
Satd. Flow (prot)		3157			3285	1506		2927			3032	
Flt Permitted		0.63			0.66	1.00		0.77			0.72	
Satd. Flow (perm)		2019			2192	1506		2250			2198	
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.90	0.90	0.90	0.94	0.94	0.94
Adj. Flow (vph)	137	448	95	88	538	219	90	751	68	59	485	65
RTOR Reduction (vph)	0	12	0	0	0	76	0	5	0	0	6	0
Lane Group Flow (vph)	0	668	0	0	626	143	0	904	0	0	603	0
Confl. Peds. (#/hr)	3		12	12		3	43		43	9		9
Heavy Vehicles (%)	2%	8%	0%	1%	5%	1%	2%	18%	3%	1%	14%	1%
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases	7	4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)		48.5			48.5	48.5		59.5			59.5	
Effective Green, g (s)		48.5			48.5	48.5		59.5			59.5	
Actuated g/C Ratio		0.40			0.40	0.40		0.50			0.50	
Clearance Time (s)		6.0			6.0	6.0		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		816			885	608		1115			1089	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.29	0.09		c0.40			0.27	
v/c Ratio		0.82			0.71	0.23		0.81			0.55	
Uniform Delay, d1		31.8			29.8	23.5		25.5			21.0	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		6.4			2.6	0.2		4.6			2.0	
Delay (s)		38.3			32.4	23.7		30.1			23.1	
Level of Service		D			C	C		C			C	
Approach Delay (s)		38.3			30.2			30.1			23.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

7: Yonge St & Aurora Heights Dr/Mark St

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	92	49	62	20	91	56	118	851	23	35	567	94
Future Volume (vph)	92	49	62	20	91	56	118	851	23	35	567	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.94		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1806	1742		1797	1794		1819	3064		1820	3176	
Flt Permitted	0.50	1.00		0.68	1.00		0.36	1.00		0.29	1.00	
Satd. Flow (perm)	949	1742		1288	1794		684	3064		565	3176	
Peak-hour factor, PHF	0.94	0.94	0.94	0.83	0.83	0.83	0.90	0.90	0.90	0.97	0.97	0.97
Adj. Flow (vph)	98	52	66	24	110	67	131	946	26	36	585	97
RTOR Reduction (vph)	0	54	0	0	26	0	0	1	0	0	9	0
Lane Group Flow (vph)	98	64	0	24	151	0	131	971	0	36	673	0
Confl. Peds. (#/hr)	11		5	5		11	12		12	4		4
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	19%	0%	0%	14%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	14.6	14.6		14.6	14.6		72.9	72.9		62.5	62.5	
Effective Green, g (s)	14.6	14.6		14.6	14.6		72.9	72.9		62.5	62.5	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.73	0.73		0.62	0.62	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	138	254		188	261		582	2233		353	1985	
v/s Ratio Prot		0.04			0.08		0.02	c0.32			0.21	
v/s Ratio Perm	c0.10			0.02			0.15			0.06		
v/c Ratio	0.71	0.25		0.13	0.58		0.23	0.43		0.10	0.34	
Uniform Delay, d1	40.7	37.9		37.2	39.8		4.2	5.4		7.5	8.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.23	0.36	
Incremental Delay, d2	15.8	0.5		0.3	3.1		0.2	0.6		0.5	0.4	
Delay (s)	56.5	38.4		37.5	43.0		4.4	6.0		2.2	3.7	
Level of Service	E	D		D	D		A	A		A	A	
Approach Delay (s)		46.6			42.3			5.8			3.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Traffic Volume (vph)	202	48	94	40	56	45	155	775	65	28	564	126
Future Volume (vph)	202	48	94	40	56	45	155	775	65	28	564	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1742	1702		1795	1750		1750	3055		1800	3179	
Flt Permitted	0.69	1.00		0.63	1.00		0.31	1.00		0.31	1.00	
Satd. Flow (perm)	1266	1702		1195	1750		573	3055		592	3179	
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	210	50	98	41	57	46	168	842	71	30	606	135
RTOR Reduction (vph)	0	77	0	0	33	0	0	5	0	0	16	0
Lane Group Flow (vph)	210	71	0	41	70	0	168	908	0	30	725	0
Confl. Peds. (#/hr)	19		8	8		19	17		17	7		7
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	4%	19%	1%	1%	13%	2%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	21.9	21.9		21.9	21.9		65.6	65.6		54.2	54.2	
Effective Green, g (s)	21.9	21.9		21.9	21.9		65.6	65.6		54.2	54.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.66	0.66		0.54	0.54	
Clearance Time (s)	6.0	6.0		6.0	6.0		3.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	372		261	383		474	2004		320	1723	
v/s Ratio Prot		0.04			0.04		0.03	c0.30			0.23	
v/s Ratio Perm	c0.17			0.03			0.20			0.05		
v/c Ratio	0.76	0.19		0.16	0.18		0.35	0.45		0.09	0.42	
Uniform Delay, d1	36.6	31.8		31.6	31.8		7.1	8.4		11.0	13.6	
Progression Factor	1.00	1.00		1.00	1.00		1.06	1.27		1.00	1.00	
Incremental Delay, d2	11.3	0.3		0.3	0.2		0.4	0.7		0.6	0.8	
Delay (s)	47.8	32.1		31.9	32.0		7.9	11.4		11.6	14.3	
Level of Service	D	C		C	C		A	B		B	B	
Approach Delay (s)		41.3			32.0			10.9			14.2	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Appendix B

Collision Analysis Memorandum

Memo

Date:	Wednesday, October 10, 2018
Project:	Master Transportation Study
To:	Town of Aurora
From:	HDR
Subject:	Collision Analysis

Introduction

The Town of Aurora's Strategic Plan identifies the Community as one of its Pillars of Success, where the Town will improve transportation, mobility, and connectivity by examining traffic patterns to identify potential solutions to improve movement and safety at key intersections in the community.

The Town's Master Transportation Study, taking direction from the Strategic Plan, is undertaking a detailed collision analysis review to identify possible contributing factors for the high collision intersections within the jurisdiction of the Town. The findings of the review will indicate if geometric restrictions, visual obstructions, insufficient signage, access point locations or human factors contribute to the high collision rates. This information will subsequently help identify appropriate mitigation measures for the Town's consideration, as well as guide the Town in prioritizing potential safety enhancements that will be discussed in a future document.

Methodology

The Town of Aurora maintains a record of collisions at Town intersections. A review of the 2015-2017 Traffic Accident Heat map provided by the Town of Aurora indicated that the highest number of collisions occurred at the following 10 intersections:

1. Yonge Street and Kennedy Street
2. Yonge Street and Golf Links Drive / Dunning Avenue
3. Yonge Street and Aurora Heights Drive / Mark Street
4. Yonge Street and Murray Drive / Edward Street
5. Yonge Street and Henderson Drive / Allaura Boulevard
6. Yonge Street and Church Street
7. Yonge Street and Orchard Heights Boulevard / Batson Drive
8. Yonge Street and Cousins Drive
9. Yonge Street and Mosely Street
10. Henderson Drive and Seaton Drive / Tamarac Trail

The above intersections were shortlisted for detailed review of historical collision data covering a 4-year period from January 2014 to January 2018. The results of the detailed review are documented within this memorandum.

It should be noted that the intersection of Yonge Street and Wellington Street is not within the Town's jurisdiction and as a result was not reviewed from a safety perspective. However, operational review of the intersection is included within the scope of the Master Transportation Study and any deficiencies will be discussed through this effort, along with opportunities for improvements which may also enhance safety at this location. The collision data was reviewed and summarized with respect to the following major collision characteristics:

- Total number of collisions at each intersection
- Collisions by impact type and driver action
- Collisions by severity
- External factors
    - Temporal distribution (by year, season / month, and time of day)
    - Driving conditions (road surface, light and weather conditions)

Collision Totals by Intersection

The number of collisions observed at each intersection are shown in **Figure 1**.

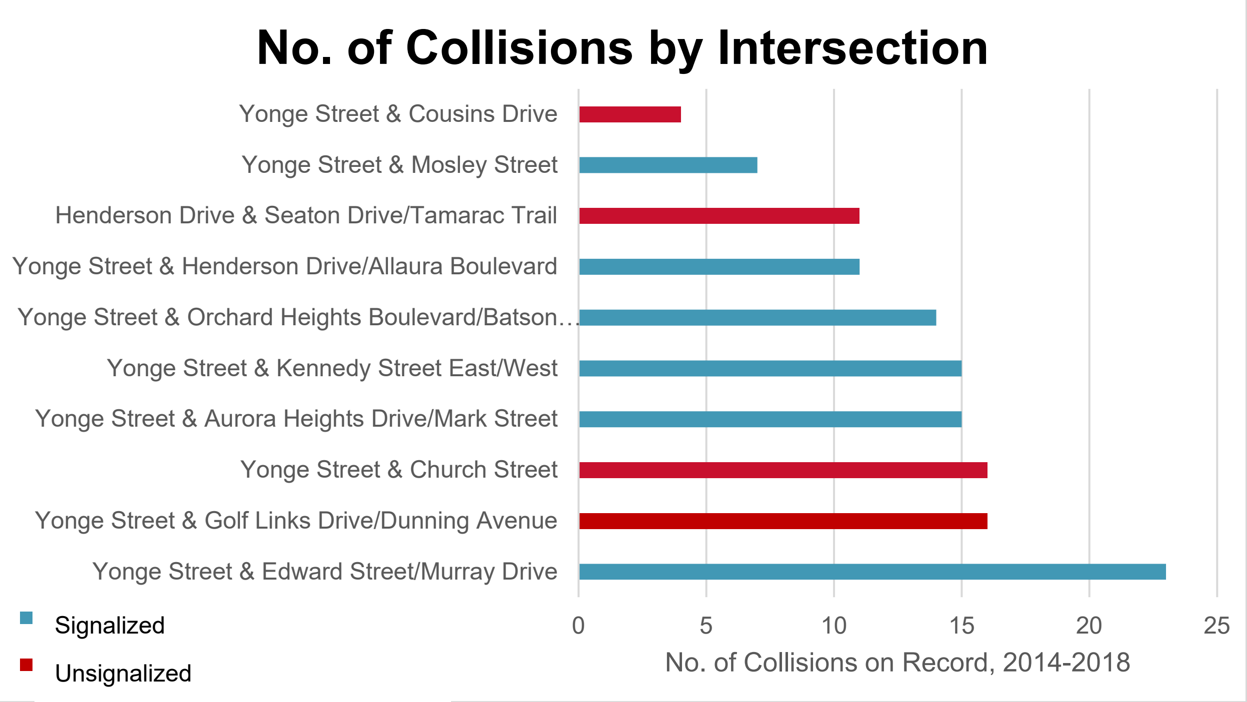


Figure 1: Collisions by Intersection

Of the top 10 intersections, the highest number of collisions occurred at Yonge Street & Edward Street/Murray Drive, followed by Yonge Street & Golf Links Drive/Dunning Avenue and Yonge Street & Church Street.

Collisions by Impact Type and Driver Action

An examination of the impact type at specific locations may lead to potential identification of geometric or other location specific conditions resulting in a higher than expected rate of specific impact types. The following section provides an overview of impact type definitions and a summary of the available data.

Impact Type Definitions

Turning movement collisions occur when two vehicles approaching from opposite directions collide as a result of at least one vehicle attempting to make a left or U-turn in front of the opposing vehicle. This is the predominant type of collision observed amongst the 10 shortlisted intersections. Common causes of turning movement collisions may be insufficient vehicle clearance intervals through the intersections or obstruction of sightlines. Potential countermeasures include increasing vehicle clearance times, improving sight-lines and providing traffic signal coordination along a corridor.

Rear-end collisions can occur when a leading vehicle makes a sudden or unexpected stop causing the following vehicle to collide, or when a following vehicle is travelling too closely to the leading vehicle. Possible causes for sudden stops include pedestrian crossings, multiple or closely spaced driveway accesses to adjacent land uses, high number of turning movements, signage/traffic control visibility, non-standard amber times, and slippery road conditions. Safety enhancements may include improved signage and lighting, access management, turn prohibitions etc.

Angle collisions occur when who vehicles approaching at an angle from non-opposing directions (i.e. not a right-angle crash) collide, often due to failing to obey stop/yield signs, running a red light etc.

Single Motor Vehicle (SMV) collisions may include run-off-road and roll-over crashes, as well as collisions with pedestrians, cyclists, animals, roadside objects or debris on the road right of way.

Approaching collisions occur when one vehicle is proceeding through the intersection and collides with another vehicle. Possible causes for this type of collision are improper turns (i.e. an unsafe left turn) or slippery road conditions (i.e. slipping into the intersection).

Sideswipe collisions occur when two vehicles are driving next to one another in the same direction and the sides of two vehicles contact one another. Possible causes for sideswipe collisions include changing lanes, merging, distracted driving, or failure to check blind-spots.

Data Summary by Impact Type and Driver Action

Table 1 shows the different types of collisions that have occurred at the 10 shortlisted intersections within the Town. Turning movement and rear-end collisions were the most frequently occurring intersection-collision types, followed by angle and single motor vehicle (SMV) collisions. The top two to three collisions by type and driver action are emphasized at each intersection with **bold font**.

Table 1: Total Collisions at Top 10 Intersections by Impact Type and Driver Action

Impact Type	Collisions	%	Driver Action	Collisions	%
Approaching	2	2%	Disobeyed Traffic Control	13	11%
Turning Movement	**38**	**31%**	Driving Properly	9	7%
Angle	**17**	**14%**	**Failed to Yield Right-of-Way**	**35**	**29%**
Rear End	**38**	**31%**	**Following too Close**	**21**	**17%**
SMV	12	10%	Improper Turn	12	10%
Sideswipe	6	5%	Speed too Fast for Conditions	4	3%
Other / Unknown	2	2%	Exceeding Speed Limit	3	2%
TOTAL	121	100%	Improper Lane Change	4	3%
			Lost Control	12	10%
			Other	8	7%
			TOTAL	121	100%

To understand if there are any location specific factors influencing specific types of collisions, a breakdown by location is provided in **Table 2**. This table only include collisions where the impact type is known (Blank and N/A records have been excluded). In addition, statistical significance testing was undertaken using the Binomial Test to identify locations where impact types are likely overrepresented compared to the entire data set (**Table 1**).

Table 2: Number of Collisions by Impact Type and Driver Action

Intersection	Impact Type	Collisions	%	Driver Action	Collisions	%
Yonge Street and Kennedy Street	Approaching	0	0%	Disobeyed Traffic Control	2	13%
	Turning Movement	**7**	**47%**	Driving Properly	0	0%
	Angle	**4**	**27%**	**Failed to Yield Right-of-Way**	**7**	**47%**
	Rear End	**3**	**20%**	Following too Close	0	0%
	SMV	1	7%	Improper Turn	2	13%
	Sideswipe	0	0%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	1	7%
	TOTAL	15	100%	Improper Lane Change	2	13%
				Lost Control	0	0%
				Other	1	7%
				TOTAL	15	100%
Yonge Street and Golf Links Drive / Dunning Avenue	Approaching	0	0%	Disobeyed Traffic Control	2	13%
	Turning Movement	**3**	**19%**	**Driving Properly**	**3**	**19%**
	Angle	**3**	**19%**	**Failed to Yield Right-of-Way**	**4**	**25%**
	Rear End	**7**	**44%**	**Following too Close**	**4**	**25%**
	SMV	2	13%	Improper Turn	1	6%
	Sideswipe	1	6%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	16	100%	Improper Lane Change	1	6%
				Lost Control	1	6%
				Other	0	0%
				TOTAL	16	100%
Yonge Street and Murray Drive / Edward Street	Approaching	1	4%	**Disobeyed Traffic Control**	**5**	**22%**
	Turning Movement	**9**	**39%**	Driving Properly	1	4%
	Angle	**5**	**22%**	**Failed to Yield Right-of-Way**	**7**	**30%**
	Rear End	**6**	**26%**	**Following too Close**	**4**	**17%**
	SMV	2	9%	Improper Turn	2	9%
	Sideswipe	0	0%	Speed too Fast for Conditions	1	4%
	Other / Unknown	0	0%	Exceeding Speed Limit	1	4%
	TOTAL	23	100%	Improper Lane Change	0	0%
				Lost Control	2	9%
				Other	0	0%

Intersection	Impact Type	Collisions	%	Driver Action	Collisions	%
				TOTAL	23	100%
Yonge Street and Henderson Drive / Allaura Boulevard	Approaching	0	0%	Disobeyed Traffic Control	1	8%
	Turning Movement	**6**	**50%**	Driving Properly	0	0%
	Angle	1	8%	**Failed to Yield Right-of-Way**	**5**	**42%**
	Rear End	**3**	**25%**	Following too Close	1	8%
	SMV	2	17%	**Improper Turn**	**2**	**17%**
	Sideswipe	0	0%	Speed too Fast for Conditions	0	0%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	12	100%	Improper Lane Change	0	0%
				Lost Control	**2**	**17%**
				Other	1	8%
				TOTAL	12	100%
Yonge Street and Church Street	Approaching	0	0%	Disobeyed Traffic Control	0	0%
	Turning Movement	**3**	**20%**	Driving Properly	1	7%
	Angle	0	0%	**Failed to Yield Right-of-Way**	**4**	**27%**
	Rear End	**7**	**47%**	**Following too Close**	**3**	**20%**
	SMV	2	13%	Improper Turn	0	0%
	Sideswipe	2	13%	Speed too Fast for Conditions	2	13%
	Other / Unknown	1	7%	Exceeding Speed Limit	1	7%
	TOTAL	15	100%	Improper Lane Change	0	0%
				Lost Control	2	13%
				Other	2	13%
				TOTAL	15	100%
Yonge Street and Orchard Heights Boulevard / Batson Drive	Approaching	0	0%	Disobeyed Traffic Control	0	0%
	Turning Movement	1	7%	Driving Properly	1	7%
	Angle	0	0%	**Failed to Yield Right-of-Way**	**3**	**21%**
	Rear End	**5**	**36%**	**Following too Close**	**4**	**29%**
	SMV*	**6**	**43%**	**Improper Turn**	**3**	**21%**
	Sideswipe	1	7%	Speed too Fast for Conditions	0	0%
	Other / Unknown	1	7%	Exceeding Speed Limit	0	0%
	TOTAL	14	100%	Improper Lane Change	1	7%
				Lost Control	1	7%
*Over Represented				Other	1	7%
				TOTAL	14	100%
Yonge Street and Aurora Heights Drive / Mark Street	Approaching	1	7%	Disobeyed Traffic Control	2	13%
	Turning Movement	**5**	**33%**	Driving Properly	2	13%
	Angle	1	7%	Failed to Yield Right-of-Way	1	7%
	Rear End	**5**	**33%**	**Following too Close**	**3**	**20%**
	SMV	1	7%	Improper Turn	0	0%
	Sideswipe	2	13%	Speed too Fast for Conditions	1	7%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	15	100%	Improper Lane Change	0	0%
				Lost Control	**3**	**20%**
				Other	**3**	**20%**
				TOTAL	15	100%
Henderson Drive and Seaton Drive / Tamarac Trail	Approaching	0	0%	Disobeyed Traffic Control	1	9%
	Turning Movement	**4**	**36%**	Driving Properly	1	9%
	Angle	**3**	**27%**	**Failed to Yield Right-of-Way**	**4**	**36%**
	Rear End	2	18%	**Following too Close**	**2**	**18%**
	SMV	2	18%	**Improper Turn**	**2**	**18%**
	Sideswipe	0	0%	Speed too Fast for Conditions	0	0%

Intersection	Impact Type	Collisions	%	Driver Action	Collisions	%
	Other / Unknown	0	0%	Exceeding Speed Limit	0	0%
	TOTAL	11	100%	Improper Lane Change	0	0%
				Lost Control	1	9%
				Other	0	0%
				TOTAL	11	100%

The following observations are noted:

1. **Turning Movement and Rear-end Collisions** occur frequently throughout the top 10 intersections (9 out of 10 are along Yonge Street)
2. **Failing to yield right-of-way** and **following too close** are the top two reported driver actions, and these correspond with turning movement, angle, and rear-end collisions.
3. **Yonge Street and Kennedy Street** has a high number of turning movement impacts where the driver failed to yield right-of-way. This may be a result of the poor sightlines associated with opposing shared thru-left lanes.
4. **Yonge Street and Murray Drive/Edward Street** has a high number of vehicular collisions in total, which may warrant further investigation. There are a number of driveway accesses on all quadrants of the intersection which could contribute to rear-end collisions, along with driver actions such as following to close.
5. **Yonge Street and Orchard Heights Boulevard/Batson Drive** - the Binomial Test indicated that SMV collisions at the intersection of were found to be disproportionately high. The majority of SMV collisions occurred under non-daylight lighting conditions and the main driver actions noted for collisions at this intersection include failing to yield right-of-way, following too close, or making improper turns. 50 percent of SMV collisions at this intersection involved a pedestrian. Field observations are recommended to assess street lighting during non-daylight hours, pedestrian crossing markings, and signage.
6. **Yonge Street/Church Street** exhibits a high number of rear-end collisions, most of which occurred in the through lanes and could have been due to vehicles making southbound left or northbound right turns from Yonge Street to Church Street. In conjunction, driver actions noted include following too close, speeding, and losing control of the vehicle.

Based the high proportion of SMV collisions, particularly at Yonge Street and Orchard Heights Boulevard/Batson Drive, SMV collision data were assessed in further detail and summarized in **Figure 2.**

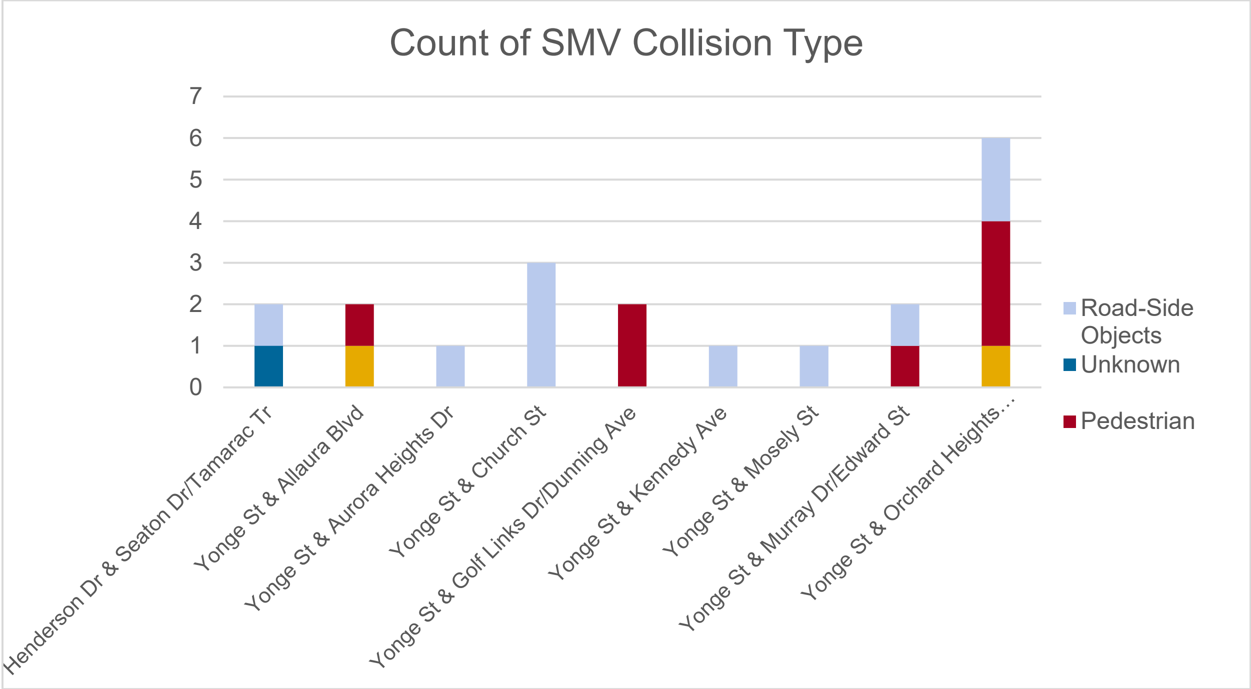


Figure 2: SMV Collision Type

The following observations are noted:

1. Of the 20 SMV collisions, 6 occurred at Yonge Street & Orchard Heights Drive/Batson Drive.
2. 3 of those 6 were pedestrian-cyclist collisions and we recommend further investigation at this intersection.
3. 2 collisions with pedestrians or cyclists occurred at Yonge St & Golf Links Drive/Dunning Avenue, and further investigations should be considered there as well.
4. 3 collisions with road-side objects occurred at Yonge and Church Street. Further investigations should be considered.

Collisions by Severity

A review of historical collision severity can provide an indication of unsafe conditions which may lead to loss of life or personal injury. Where severe collisions appear to occur more frequently than can be reasonably expected, further investigation is warranted and improvements to geometric design, regulation and signage must be considered to prevent or mitigate future incidents.

Of the 133 total collisions recorded in the historical collision data at the top 10 intersections between 2014 and 2018, the intersection of Yonge Street & Golf Links Drive / Dunning Avenue had the most severe collisions (5), followed by Yonge Street & Church Street with 4 severe collisions. The collision severity is shown in **Figure 3.**

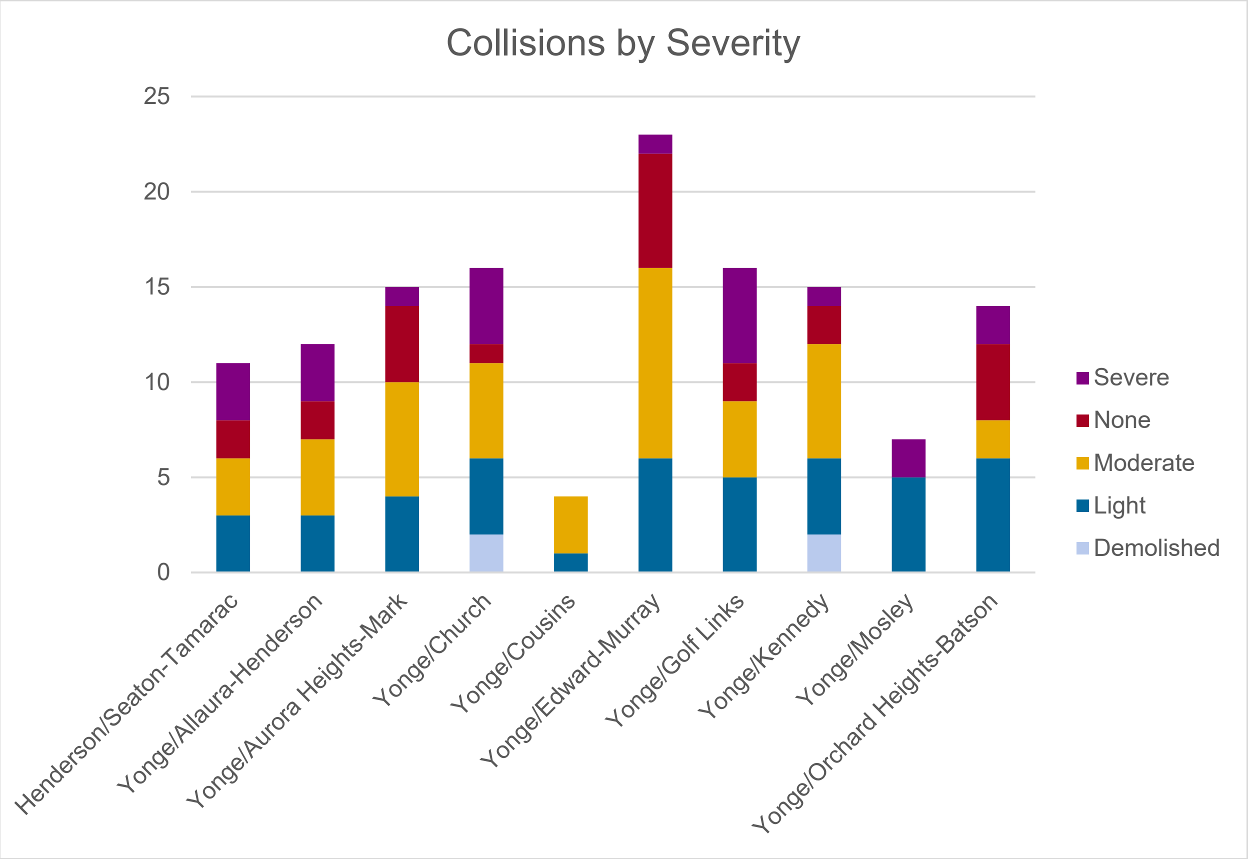


Figure 3: Collision by Severity

Both intersections, Yonge Street & Golf Links Drive / Dunning Avenue and Yonge Street & Church Street are unsignalized. **Field observations are recommended to assess any need for possible improvements to geometric design, signage, or signalization.**

Of the 133 total collisions recorded in the historical collision data from 2014, 108 collisions were recorded as property damage only (P.D. only), 25 collisions resulted in non-fatal injuries, and zero collisions resulted in a fatality. The Injury Type / Damage Classification is shown in **Figure 4.**

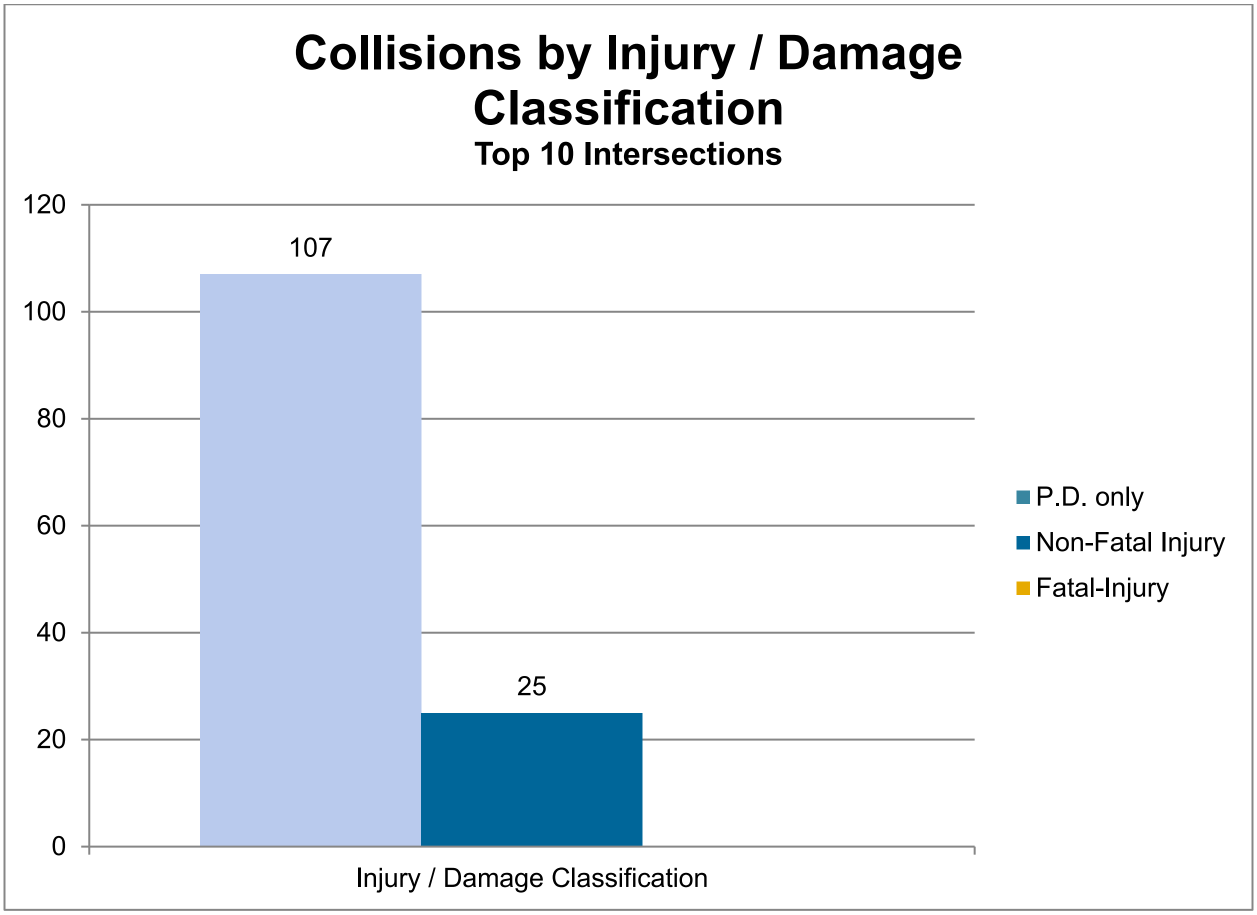


Figure 4: collisions by Injury / Damage Classification

External Factors

External factors include temporal distribution such as yearly variances, seasonal, and time of day. Driving conditions are also identified in this section, to provide an understanding of road surface, light, and weather conditions. Should the data indicate any statistical outliers, further investigation may be warranted.

Temporal Distribution

As shown in **Figure 5**, the number of collisions spiked in 2017 with 62 collisions, doubling the number of collisions in 2016. Overall, there were more collisions in the months of March, April, July, and September to December than the previous years; the majority of which occurred on clear days. **Based solely on this desktop review, we cannot comment on whether any external factors impacted the spike in collisions in 2017.**

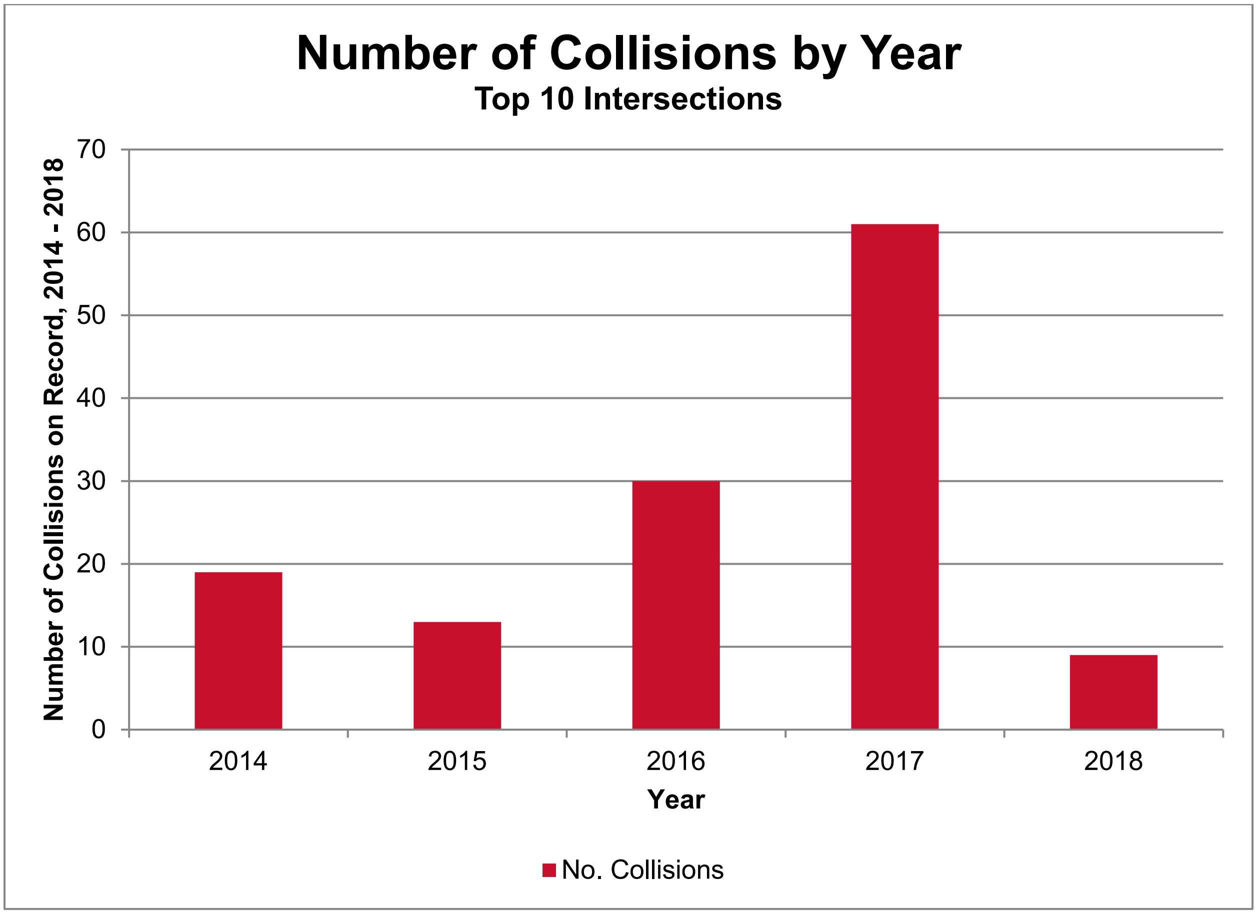


Figure 5: Number of Collisions by Year

Figure 6 illustrates that almost half of all recorded collisions occurred during the winter months from December to March. Most of the collisions occurred between 12 noon and 6 PM (**Figure 7**) which is generally proportional to the times of day with higher traffic volumes. Seven of the ten intersections with the high collision rates are located between Wellington Street and Industrial Parkway south, spanning parts of the Downtown and South Yonge Street Promenade areas. Because this stretch of road features restaurants, retail, commercial and retail establishments, the increase in collisions may be explain by the increased activity on Yonge Street during the day. Further, Dr. GW Williams Secondary School is located just south of Golf Links Drive/Dunning Avenue and could also contribute to the spike in number of collisions after 3 PM.

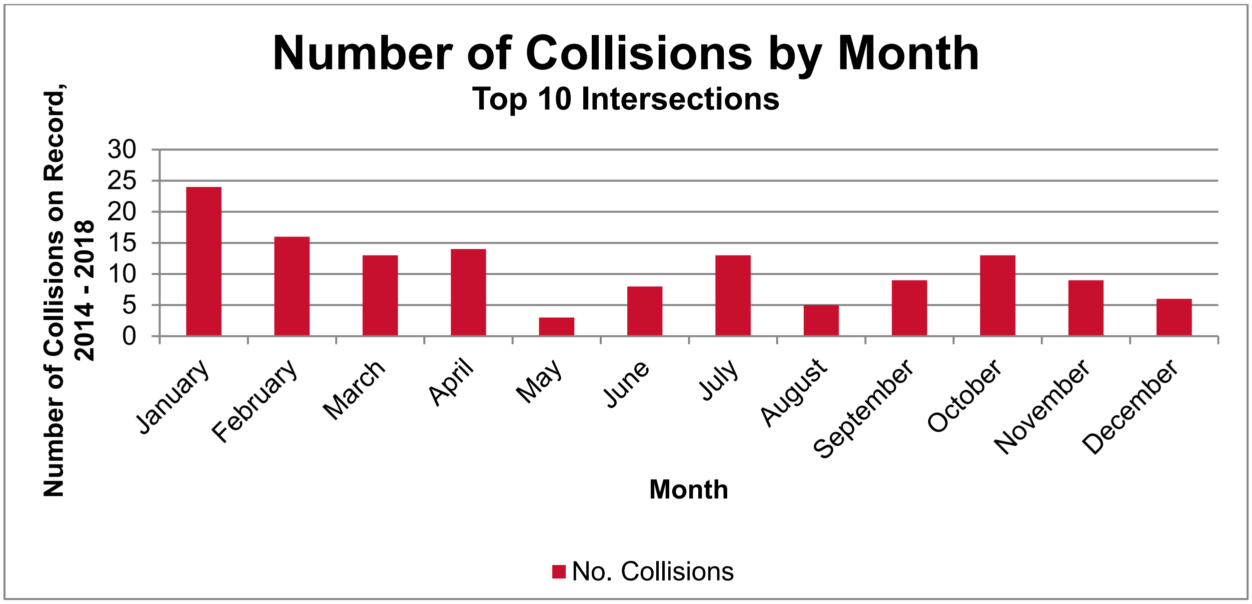


Figure 6: Collisions by Months

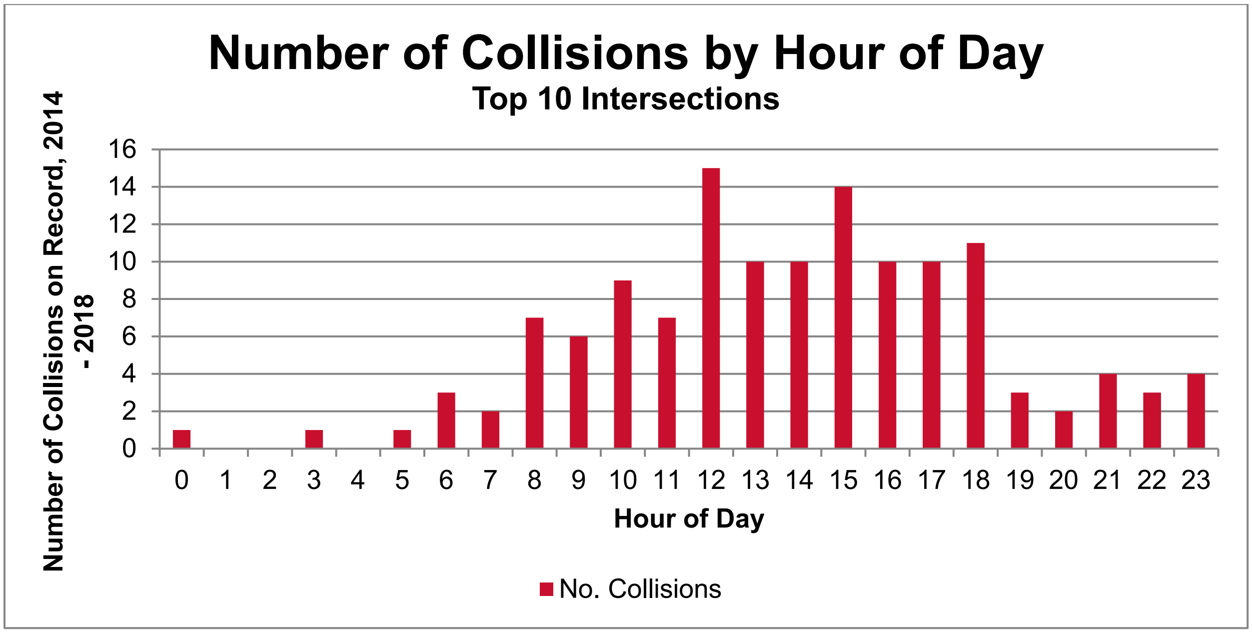


Figure 7: Collisions by Time of Day

Driving Conditions

As shown in **Figure 8**, collisions occurred mostly during the daytime, while less than one-fourth of the collisions were reported to occur in conditions with lower light levels including dusk, dawn, and during nighttime. This appears in line with traffic volumes at these times of day and thus **in general, light conditions do not appear to be a factor at the top 10 intersections**.

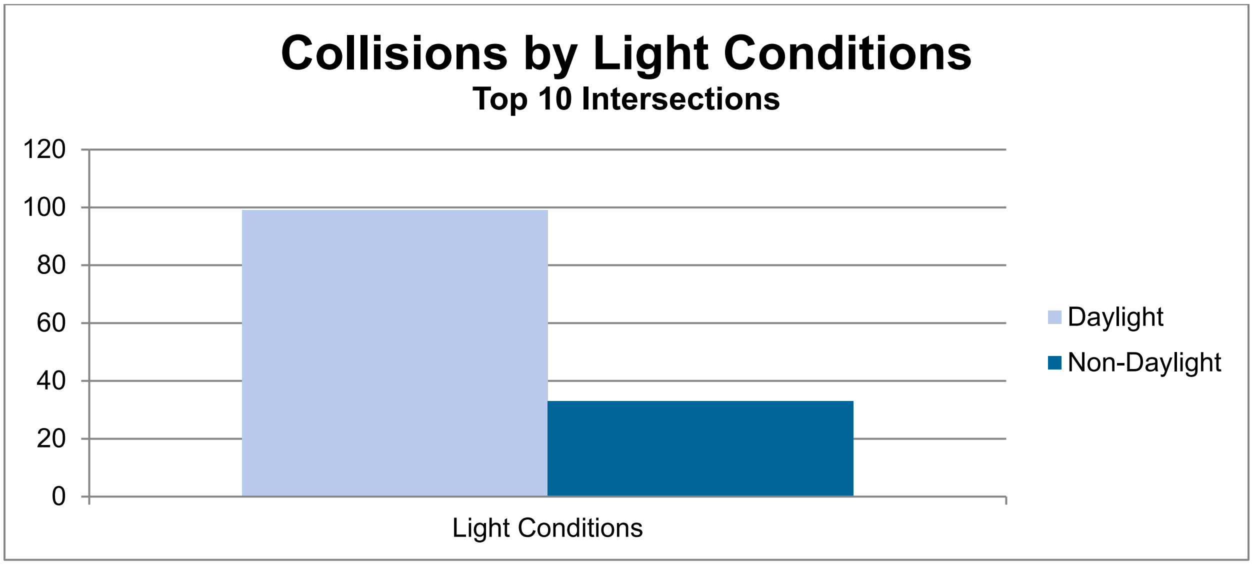


Figure 8: Collisions by Light Conditions

Figure 9 illustrates the number of collisions by road surface conditions. The majority of the collisions at the 10 locations occurred when the surface conditions of the road were dry. 20% of the collisions took place in wet road surface conditions while a combined 14% of the collisions occurred in wintry road surface conditions with packed snow, loose snow, or slush on the ground.

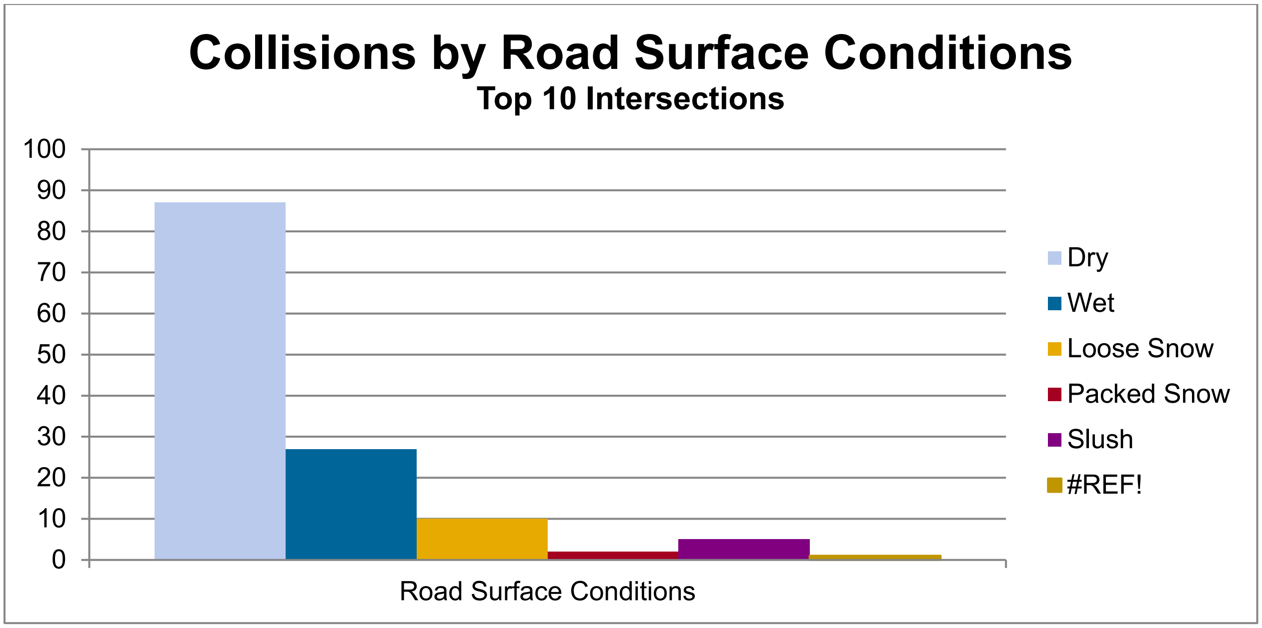


Figure 9: Collision by Road Surface Conditions

A comparison was undertaken to determine whether accidents occurring during a specific road surface condition happens more frequently at any particular intersection. Based on **Figure 10**, **there does not seem to be a trend indicating a high proportion of road surface condition collisions at a certain intersection**.

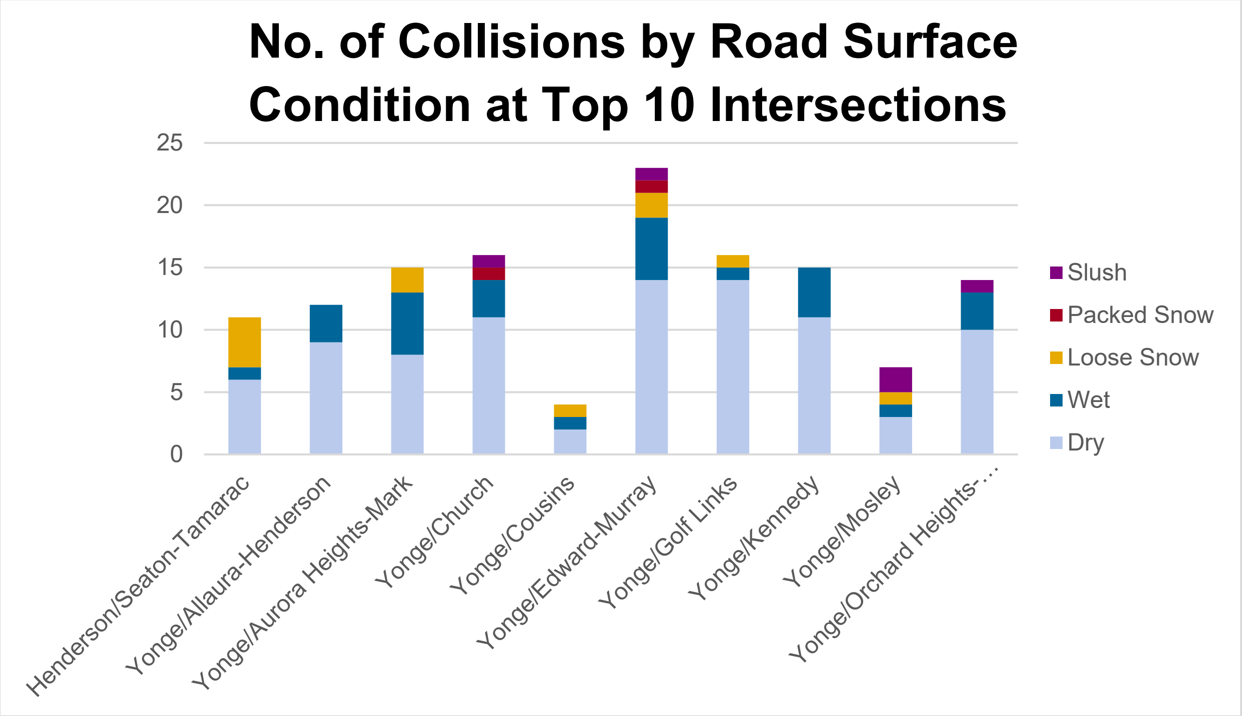


Figure 10: Collisions by Road Surface Condition at Top 10 Intersections

The weather conditions were reported to be clear for 80% of all collisions, and raining or snowing for 20% of the collisions. **Figure 11** illustrates the number of collisions by weather conditions.

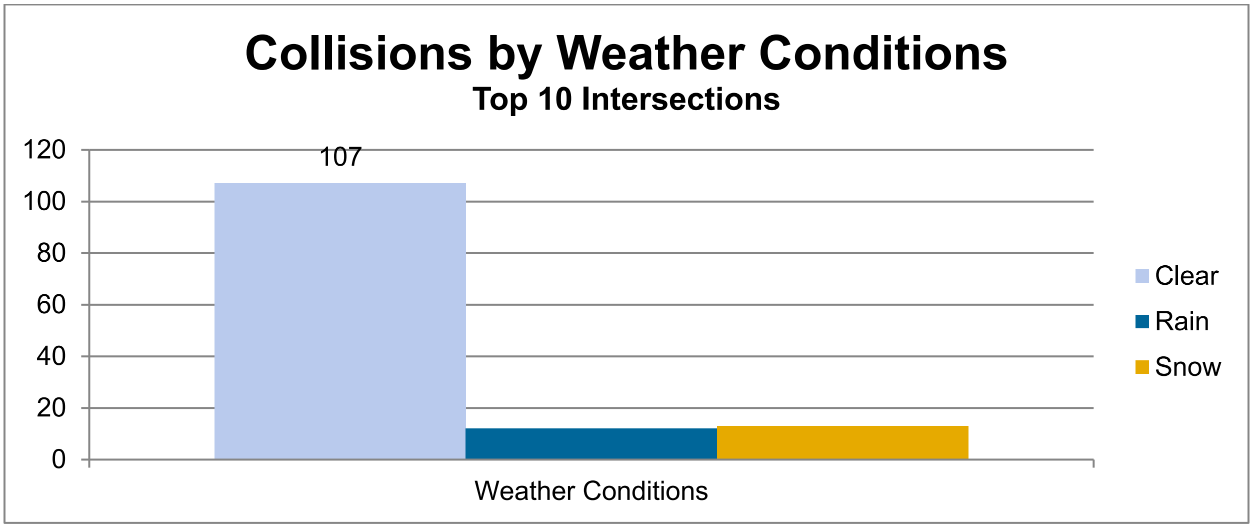


Figure 11: Collisions by Weather Conditions

Although many collisions occurred in the winter months, **driving conditions do not appear to be a major contributing factor to the observed collisions at the 10 short-listed intersections in the Town** since majority of them occurred in the daytime, with clear weather and dry road surface. **Figure 12** and **Figure 13** compare the number of collisions by weather conditions at each intersection for December to March and April to November, respectively.

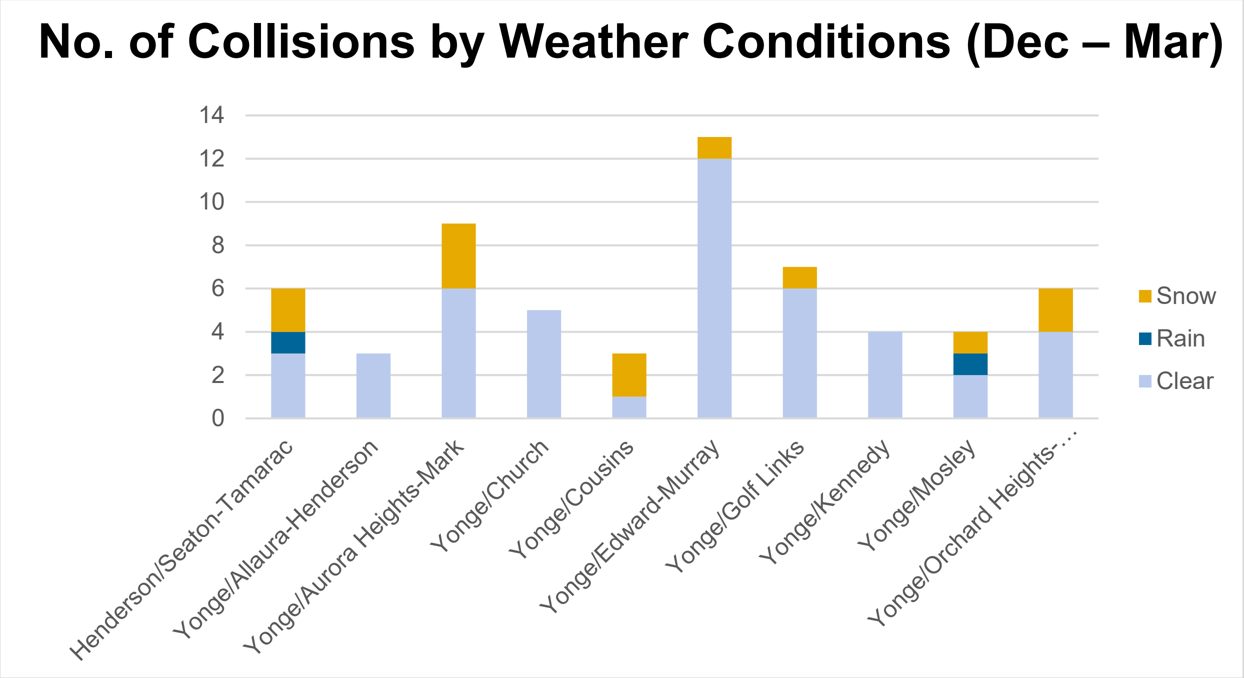


Figure 12: Collisions by Weather Conditions (December to March)

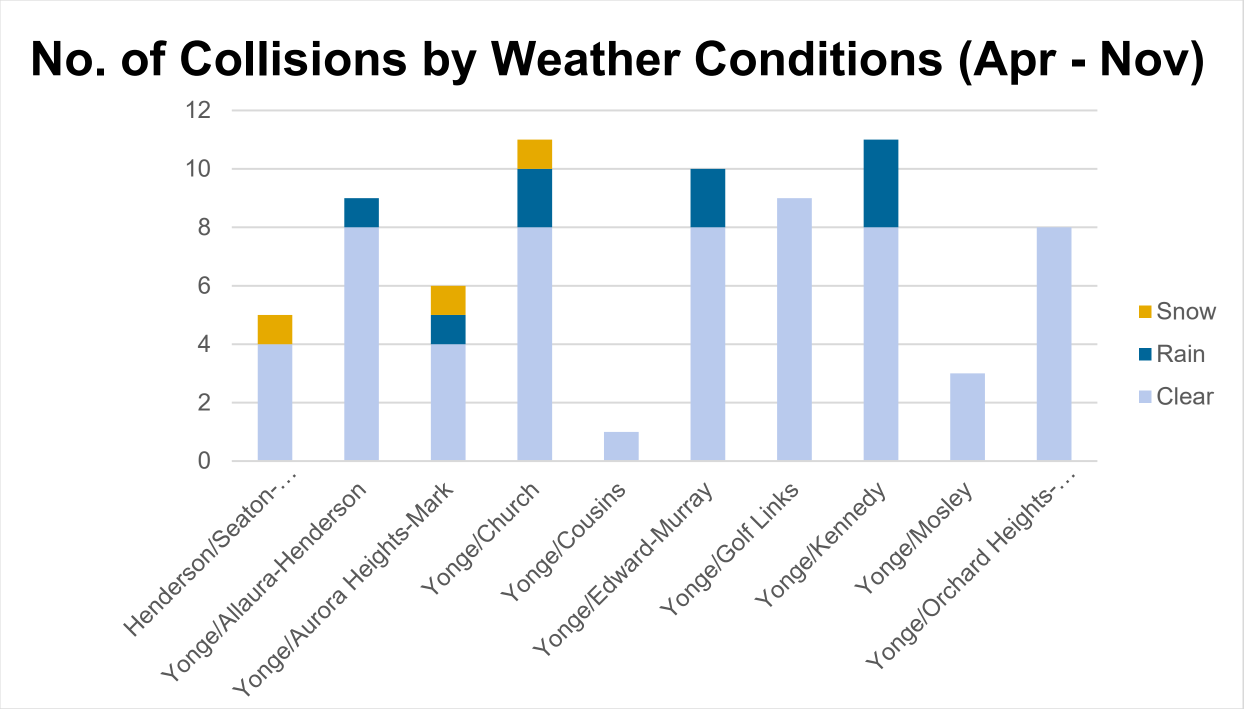


Figure 13: Collisions by Weather Conditions (April to November)

Summary of Findings

Collision types and driver action findings:

1. **Turning Movement and Rear-end Collisions** occur frequently throughout the top 10 intersections (9 out of 10 are along Yonge Street)
2. **Failing to yield right-of-way** and **following too close** are the top two reported driver actions, and these correspond with turning movement, angle, and rear-end collisions.
3. **Yonge Street and Kennedy Street** has a high number of turning movement impacts where the driver failed to yield right-of-way. This may be a result of the poor sightlines associated with opposing shared thru-left lanes.
4. **Yonge Street and Murray Drive/Edward Street** has a high number of vehicular collisions in total, which may warrant further investigation. There are a number of driveway accesses on all quadrants of the intersection which could contribute to rear-end collisions, along with driver actions such as following to close.
5. **Yonge Street and Orchard Heights Boulevard/Batson Drive -** the Binomial Test indicated that SMV collisions at the intersection of were found to be disproportionately high. The majority of SMV collisions occurred under non-daylight lighting conditions and the main driver actions noted for collisions at this intersection include failing to yield right-of-way, following too close, or making improper turns. 50 percent of SMV collisions at this intersection involved a pedestrian. Field observations are recommended to assess street lighting during non-daylight hours, pedestrian crossing markings, and signage.
6. **Yonge Street/Church Street** exhibits a high number of rear-end collisions, most of which occurred in the through lanes and could have been due to vehicles making southbound left or northbound right turns from Yonge Street to Church Street. In conjunction, driver actions noted include following too close, speeding, and losing control of the vehicle.

SMV collision review:

1. Of the 20 SMV collisions, 6 occurred at Yonge Street & Orchard Heights Drive/Batson Drive.
2. 3 of those 6 were pedestrian-cyclist collisions and we recommend further investigation at this intersection.
3. 2 collisions with pedestrians or cyclists occurred at Yonge St & Golf Links Drive/Dunning Avenue, and further investigations should be considered there as well.
4. 3 collisions with road-side objects occurred at Yonge and Church Street. Further investigations should be considered.

Collision severity review:

Yonge Street & Golf Links Drive / Dunning Avenue and Yonge Street & Church Street exhibit the highest number of severe collisions out of the top 10 intersections. Because both are unsignalized, **field observations are recommended to assess any need for possible improvements to geometric design, signage, or signalization.**

External factors review:

No significant trends with respect to road surface, lighting or seasonal or temporal factors were identified.

Next Steps

The next steps will include:

- Conduct site investigations at the following intersections:
    - Yonge Street and Kennedy Street
    - Yonge Street and Murray Drive/Edward Street
    - Yonge Street and Orchard Heights Boulevard/Batson Drive
    - Yonge Street and Church Street
    - Yonge Street and Golf Links Drive/Dunning Avenue
- Determining improvements to enhance the safety at key locations; and,
- Prioritizing the potential for safety improvements.

Appendix C

Yonge Street Road Diet Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑	↱		↰↑↱			↰↑↱	
Traffic Volume (vph)	143	722	155	85	499	136	55	508	97	170	904	236
Future Volume (vph)	143	722	155	85	499	136	55	508	97	170	904	236
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0	6.0		6.0			6.0	
Lane Util. Factor		0.95			0.95	1.00		0.95			0.95	
Frpb, ped/bikes		1.00			1.00	0.94		0.99			0.99	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.98			1.00	0.85		0.98			0.97	
Flt Protected		0.99			0.99	1.00		1.00			0.99	
Satd. Flow (prot)		3210			3247	1388		3214			3219	
Flt Permitted		0.69			0.54	1.00		0.53			0.63	
Satd. Flow (perm)		2241			1756	1388		1721			2056	
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	166	840	180	89	520	142	62	577	110	187	993	259
RTOR Reduction (vph)	0	12	0	0	0	53	0	10	0	0	16	0
Lane Group Flow (vph)	0	1174	0	0	609	89	0	740	0	0	1423	0
Confl. Peds. (#/hr)	30		11	11		30	22		25	25		22
Heavy Vehicles (%)	4%	4%	3%	10%	5%	5%	8%	3%	7%	2%	3%	3%
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			6		5	2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)		56.0			56.0	56.0		52.0			52.0	
Effective Green, g (s)		56.0			56.0	56.0		52.0			52.0	
Actuated g/C Ratio		0.47			0.47	0.47		0.43			0.43	
Clearance Time (s)		6.0			6.0	6.0		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		1045			819	647		745			890	
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.35	0.06		0.43			c0.69	
v/c Ratio		1.12			0.98dl	0.14		0.99			1.60	
Uniform Delay, d1		32.0			26.1	18.2		33.8			34.0	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		68.2			3.7	0.1		31.5			274.9	
Delay (s)		100.2			29.8	18.3		65.3			308.9	
Level of Service		F			C	B		E			F	
Approach Delay (s)		100.2			27.6			65.3			308.9	
Approach LOS		F			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	153.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Yonge St & Wellington St W/Wellington St E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (vph)	144	731	157	84	497	135	41	374	71	122	645	169
Future Volume (vph)	144	731	157	84	497	135	41	374	71	122	645	169
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0		4.0	6.0	
Lane Util. Factor		0.95			0.95	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	0.99		1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3209			3247	1388	1601	1700		1695	1696	
Flt Permitted		0.70			0.54	1.00	0.10	1.00		0.14	1.00	
Satd. Flow (perm)		2247			1753	1388	175	1700		255	1696	
Peak-hour factor, PHF	0.86	0.86	0.86	0.96	0.96	0.96	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	167	850	183	88	518	141	47	425	81	134	709	186
RTOR Reduction (vph)	0	12	0	0	0	53	0	5	0	0	8	0
Lane Group Flow (vph)	0	1188	0	0	606	88	47	501	0	134	887	0
Confl. Peds. (#/hr)	30		11	11		30	22		25	25		22
Heavy Vehicles (%)	4%	4%	3%	10%	5%	5%	8%	3%	7%	2%	3%	3%
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	7	4			8			6		5	2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)		56.0			56.0	56.0	38.6	38.6		52.0	52.0	
Effective Green, g (s)		56.0			56.0	56.0	38.6	38.6		52.0	52.0	
Actuated g/C Ratio		0.47			0.47	0.47	0.32	0.32		0.43	0.43	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0		4.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1048			818	647	56	546		223	734	
v/s Ratio Prot								0.29		0.05	c0.52	
v/s Ratio Perm		c0.53			0.35	0.06	0.27			0.21		
v/c Ratio		1.13			1.00dl	0.14	0.84	0.92		0.60	1.21	
Uniform Delay, d1		32.0			26.1	18.2	37.8	39.2		25.3	34.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		72.1			3.6	0.1	79.8	22.6		4.5	106.4	
Delay (s)		104.1			29.7	18.3	117.6	61.8		29.8	140.4	
Level of Service		F			C	B	F	E		C	F	
Approach Delay (s)		104.1			27.6			66.5			126.0	
Approach LOS		F			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	88.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	141.7%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

Appendix D

Parking Lot Types in the Town of Aurora

Label	Id	Name	Supply	Friday Peak Demand	Saturday Peak Demand	Friday Utilization (%)	Saturday Utilization (%)	Note
G1	106	Aurora Go Parking West Lot	381	331	36	87	9	
G2	107	Aurora Go Parking Central Left Lot	33	18	14	55	42	
G3	108	Aurora Go Parking Central Right Lot	67	65	21	97	31	
G4	109	Aurora Go Parking South Lot	144	141	73	98	51	
G5	110	Aurora Go Parking Central South Lot	19	15	11	79	58	
G6	111	Aurora Go Parking Indoor Lot Level 1	160	136	19	85	12	82% Represents Combined Friday Utilization, including Levels 1 through Level 5.
	111	Aurora Go Parking Indoor Lot Level 2	160	154	5	96	3	
	111	Aurora Go Parking Indoor Lot Level 3	160	95	10	59	6	
	111	Aurora Go Parking Indoor Lot Level 4	160	152	6	95	4	
	111	Aurora Go Parking Indoor Lot Level 5	160	116	2	73	1	

Label	Id	Location	Direction	Supply	Friday Peak Demand	Saturday Peak Demand	Friday Utilization (%)	Saturday Utilization (%)	Note
M1	-	Wellington St Between Yonge St & Victoria St	N/A for multiple businesses	26	9	9	35	35	Part of the lot is privately owned (P10)
M2	15	Wellington St Between Temperance St & Yonge St	South	63	49	45	78	71	Supply Estimated
M3	25	Mosley St Between Wells St & Larmont St	South	20	3	16	15	80	Supply Estimated. On-Street Blvd Parking with Time
M4	29	Metcalfe St Between Wells St & Larmont St	North	37	3	33	8	89	Supply Estimated. On-Street Blvd Parking with Time
M5	71	Wells St Between Mosley St & Metcalfe St	East	30	4	6	13	20	Supply Estimated. On-Street Blvd Parking with Time
M6	79	Larmont St Between Mosley St & Metcalfe St	West	28	5	6	18	21	Supply Estimated. On-Street Blvd Parking with Time
M7	-	Maple Street between Spruce St & Fleury St	McMahon Park & Aurora Community Tennis Club	31	12	12	39	39	McMahon Park Parking Owned by the Town

Label	Name	Business	Supply	Friday Peak Demand	Saturday Peak Demand	Friday Utilization (%)	Saturday Utilization (%)	Note
P1	North of Aurora Heights Drive between Yonge St & Spruce St	Glow medi spa	13	5	5	38	38	
P2	South of Aurora Heights Drive between Yonge St & Spruce St	MCF mortgage investments	15	4	5	27	33	
P3	Centre St Between Walton St & Train Tracks	Owned by adjacent property owner.	42	22	18	52	43	Owner is at 124 Wellington St E.
P4	Centre St Between Yonge St & Spruce St	Multiple Businesses	91	53	65	58	71	
P5	Centre St Between Walton St & Train Tracks	Multiple Businesses	52	22	26	42	50	
P6	Wellington St Between George St & Mill St	York Region District School Board	247	96	8	39	3	
P7	North of Wellington St Between Mill St & Temperance St	Maunders Food Shop	36	8	8	22	22	
P8	South of Wellington St Between Mill St & Temperance St	Bacon Basketware	40	8	8	20	20	
P9	Wellington St Between Temperance St & Yonge St	Multiple Businesses	8	6	7	75	88	
P10	Wellington St Between Yonge St & Victoria St	Multiple Businesses	26	9	9	35	35	Part of the lot is owned by the Town (M1)
P11	North of Wellington St Between Victoria St & Wells St	Multiple Businesses	30	15	17	50	57	
P12	South of Wellington St Between Victoria St & Wells St	Multiple Businesses	50	38	39	76	78	
P13	North of Wellington St Between Wells St & Larmont St	Multiple Businesses	6	3	4	50	67	
P14	South of Wellington St Between Wells St & Larmont St	Scholar's Edge	62	34	32	55	52	
P15	Wellington St Between Larmont St & Train Tracks	Multiple Businesses	59	30	36	51	61	Realty Centre Lot Count Overlaps with Label P63
P16	Tyler St Between Temperance St & Yonge St	Residential / Allure Spa	27	23	19	85	70	
P17	North of Mosley St Between Yonge St & Victoria St	Curly and Company Salon	20	7	7	35	35	
P18	South of Mosley St Between Yonge St & Victoria St	Walts Bar + Baptist Church	64	34	39	53	61	
P19	North of Church St Between Yonge St & Victoria St	Aurora Library	66	39	28	59	42	
P20	South of Church St Between Yonge St & Victoria St	Dentistry + Church St Montessori	12	9	7	75	58	
P21	Kennedy St Between Yonge St & Gurnett St	Aurora Medical	51	38	38	75	75	
P22	North of Ransom St Between Temperance St & Yonge St	Country Style	16	12	10	75	63	
P23	South of Ransom St Between Temperance St & Yonge St	Abbotsford Animal Hospital	25	11	7	44	28	
P24	West of George St Between Wellington & Map Limit	Residential (85 Wellington St W)	32	22	24	69	75	Map Limit is 100m South of Wellington
P25	East of George St Between Wellington & Map Limit	Chartwell Long Term Care + Residential (49 George)	67	40	42	60	63	Map Limit is 100m South of Wellington
P26	Mill St Between Wellington St & Tyler St	Millwell Apartments + Chartwell Long Term Care	93	73	79	78	85	
P27	Machell St Between Irwin St & Wellington St	Cigar Company + Residential (36 Machell Ave)	39	18	20	46	51	St Andrews Cigar Company ""Permanently Closed""
P28	Temperance St Between Wellington St & Tyler St	Bijoys Restaurant	10	4	3	40	30	
P29	West of Temperance St Between Tyler St & Reubeb St	Residential (90 Temperance St) + 64 Temperance St	92	56	49	61	53	
P30	East of Temperance St Between Tyler St & Reubeb St	Honsberger Physio +"" + Aqua Grill	85	45	50	53	59	
P31	West of Yonge St Between North Map Limit & Maple St	RBC Plaza	124	95	85	77	69	Map Limit is 50m North of Maple St
P32	East of Yonge St Between North Map Limit & Maple St	Allan Law - Barristers and Solicitors	11	11	10	100	91	Map Limit is 50m North of Maple St
P33	West of Yonge St Between Maple St & Catherine Ave	State Farm	12	5	6	42	50	
P34	East of Yonge St Between Maple St & Catherine Ave	Our Lady of Grace Church	170	18	35	11	21	
P35	Yonge St Between Catherine Ave & Centre St	Aurora Transit Auto Glass + Supreme Collision	16	11	12	69	75	
P36	Yonge St Between Centre St & Wellington St	Dollarama + BMO	88	44	54	50	61	
P37	West of Yonge St Between Wellington St & Mosley St	TC's Burgers	16	11	13	69	81	
P38	East of Yonge St Between Wellington St & Mosley St	Old Town Hall + 15207 Yonge St + Smiles Dental	107	58	71	54	66	Old Town Hall is now Vintage Spice + Pauls Barber
P39	Yonge St Between Mosley St & Church St	Dental Care + Optometrists	8	5	6	63	75	
P40	West of Yonge St Between Church St & Reuben St	Multiple Businesses	66	42	36	64	55	
P41	East of Yonge St Between Church St & Reuben St	Multiple Businesses	83	36	41	43	49	
P42	West of Yonge St Between Reuben St & Kennedy St	Needles & Knits + 15032 Yonge St	26	4	4	15	15	
P43	East of Yonge St Between Reuben St & Kennedy St	Park Place/ Chartwell Park Place + MCR Insurance	32	14	17	44	53	Chartwell Park Place Retirement Residence
P44	West of Yonge St Between Kennedy St & Ransom St	Multiple Businesses	60	27	34	45	57	
P45	East of Yonge St Between Kennedy St & Ransom St	Multiple Businesses	88	37	38	42	43	

P46	Yonge St Between Ransom Crt & Cousins St	Bell + Residential Apartments	42	25	21	60	50	
P47	Victoria St Between Wellington St & Mosley St	Freedom from Addiction	26	9	7	35	27	
P48	West of Victoria St Between Mosley St & Church St	Public School + Victoria Hall/Church	26	16	16	62	62	
P49	East of Victoria St Between Mosley St & Church St	Trinity Church + Residential (71 Victoria St)	37	16	10	43	27	
P50	Gurnett St Between Harrison Ave & Connaughat St	Apartment Complex (90 Gurnett St)	58	34	29	59	50	Victoria St Turns into Gurnett St
P51	Edward St Between Metcalfe St & Harrison Ave	Aurora Collision	26	19	18	73	69	Larmont St to South of Metcalfe St is Edward St
P52	Edward St Between Harrison Ave & Connaughat St	Auto Paint Repairs	21	8	8	38	38	Larmont St to South of Metcalfe St is Edward St
P53	Edward St Between Connaughat St & South Map Limit	Labyrinth Escape Games	54	21	19	39	35	Map Limit is 60m South of Connaughat Ave
P54	North of Centre St Between Train Tracks (West) & Centre Cres	136 Centre St + 138 Centre St [Small Steps]	29	16	17	55	59	
P55	South of Centre St Between Train Tracks (West) & Centre Cres	147 Centre St + Falcon Lam Financial	29	17	19	59	66	
P56	Wellington St Between Train Tracks (West) & Ross St	Aurora Computer Technologies	47	19	31	40	66	
P57	North of Wellington St Between Ross St & Industrial Pkwy N	Aurora Renovation Centre	130	68	55	52	42	
P58	South of Wellington St Between Ross St & Industrial Pkwy S	Sushi Den Teppanyaki	40	12	12	30	30	
P59	Wellington St Between Inudstrial Pkwy S & Mary St	Multiple Businesses	381	180	200	47	52	
P60	Mary St Between Industrial Pkwy S & Industry St	Vienna Furniture Refinishing	28	6	6	21	21	
P61	West of Mary St Between Industry St & Wellington St	Service Ontario Aurora Plaza	126	63	74	50	59	
P62	East of Mary St Between Industry St & Wellington St	Tilemaster + Hyundai Aurora	290	196	206	68	71	
P63	Berczy St Between Wellington St E & Mosley St	Multiple Businesses	111	58	72	52	65	Realty Centre Lot Count Overlaps with Label P15
P64	Berczy St Between Mosley St & Metcalfe St	Aurora Custom Mouldings	10	3	3	30	30	
P65	Berczy St Between Metcalfe St & End of Road (South)	Kobra Towing Impound Yard + Krwon Rust Protection	38	9	8	24	21	
P66	North of Industrial Pkwy S Between Industry St & Mary St	Multiple Businesses	75	38	45	51	60	
P67	South of Industrial Pkwy S Between Industry St & Mary St	Multiple Businesses	87	23	23	26	26	
P68	Industrial Pkwy S Between Mary St & South Map Limit	Dave's Garage	20	14	13	70	65	Map Limit is 300m South of Mary St
P69	Industrial Pkwy N Between North Map Limit & Centre St	Blower Engineering	32	16	26	50	81	Map Limit is 80m North of Centre St
P70	Industrial Pkwy Between Centre St & Wellington St	Aurora Tire & Wheel	23	14	14	61	61	
P71	West of Industrial Pkwy Between Wellington St & Industry St	Multiple Businesses	53	26	26	49	49	
P72	East of Industrial Pkwy Between Wellington St & Industry St	Multiple Businesses	144	57	53	40	37	
P73	West of Industry St Between Industrial Pkwy S & Mary St	RN McWatters Mechanical Ltd	42	28	25	67	60	
P74	East of Industry St Between Industrial Pkwy & Mary St	Multiple Businesses	57	37	34	65	60	
P75	Industry St Between Mary St & End of Road (South)	Tennex Systems	20	6	5	30	25	
P76	John West Way St Between Wellington St & North Map Limit	Multiple Businesses	164	90	99	55	60	Map Limit is 150m North of Wellington St
P77	Industry St Between Mary St & End of Road (South)	Sheppard's Bush Conservation Area	60	15	27	25	45	Supply Estimated. Owned by Ontario Heritage Trust.

Appendix E

Metrolinx's Evaluation Method of GO Station Parking Utilization

Table 24: Town of Aurora Potential Parking Area Evaluation Table

Criteria	Town Hall/Seniors Centre			Aurora Family Leisure Complex		Sheppard's Bush	Sheppard's Bush Soccer Field	Town Park/ Farmers Market	Library/Aurora Cultural Centre			Victoria Street			Former Aurora United Church		Temperance Street		McMahon Park	Aurora Community Centre			Machell Park		
Total Number of Parking Spaces	190 🟢			293 🟢		80 🟡	68 🟡	103 🟢	97 🟡			26 🔴			13 🔴		60 🟡		27 🔴	171 🟢			50 🟡		
Peak Occupancy Hours*	08:00-19:30 🔴			09:00-12:30 🟡	17:30-19:30 🟡	07:30-17:00 🔴	None 🟢	12:00-18:00 🟢	9:30-17:30 🟡			8:00-18:00 🔴			10:30-14:00 🟢		07:00-17:00 🔴		None 🟢	06:30-12:00 🔴	16:00-19:30 🔴		15:30-17:30 🟢		
Percentage of Spaces in use During Peak Hours (Winter)	75%			33%	51%	81%	0%	12%	78%			54%			69%		57%		0%	16%	25%		32%		
Estimated Number of Spaces Available During Peak Hours (Winter)	47 🟡			197 🟢	145 🟢	15 🔴	68 🟢	91 🟢	21 🔴			12 🔴			4 🔴		26 🔴		27 🟢	143 🟢	129 🟢		34 🔴		
Walking Travel Path																									
Travel Distance from Parking Lot to GO Station (km)	1.20			1.00		0.55	0.65	0.36	0.65			0.65			0.90		0.90		1.10	1.50			1.50		
Total Travel Time (min)	**14** 🟡			**12** 🟡		**7** 🟢	**8** 🟢	**4** 🟢	**8** 🟢			**8** 🟢			**11** 🟡		**11** 🟡		**13** 🟡	**18** 🔴			**18** 🔴		
Sidewalk Availability	Y 🟢			Y 🟢		N 🔴	Y 🟢	Y 🟢	Y 🟢			Y 🟢			Y 🟢		Y 🟢		Y 🟢	Y 🟢			Y 🟢		
Lighting Availability	Y 🟢			Y 🟢		N 🔴	N 🔴	Y 🟢	Y 🟢			Y 🟢			Y 🟢		Y 🟢		Y 🟢	Y 🟢			Y 🟢		
Public Transit Travel Path																									
YRT Bus Line	**32**	**33A**	**54**	**31**		**-**	**-**	**-**	**32**	**33A**	**54**	**32**	**33A**	**54**	**32**	**33A**	**32**	**33A**	**-**	**32**	**33**	**54**	**32**	**33**	**54**
1.Walk From Parking Lot to Bus Stop (min)	5	5	5	0		-	-	-	5	5	5	2	2	2	3	3	1	1	-	10	10	12	11	11	12
2.Minimum Bus Journey Time (min)	2	2	3	2		-	-	-	2	2	1	1	1	1	2	2	2	2	-	2	1	1	2	1	1
3.Walk From Bus Stop to Go Station (min)	2	2	2	4		-	-	-	2	2	2	2	2	2	2	2	2	2	-	2	3	2	2	3	2
Total Maximum Travel Time (min)	**39**	**39**	**40**	**36**		**-**	**-**	**-**	**39**	**39**	**38**	**35**	**35**	**35**	**37**	**37**	**35**	**35**	**-**	**0**	**44**	**45**	**45**	**45**	**45**
Total Minimum Travel Time (min)	**9** 🟢	**9** 🟢	**10** 🟢	**6** 🟢		**-** -	**-** -	**-** -	**9** 🟢	**9** 🟢	**8** 🟢	**5** 🟢	**5** 🟢	**5** 🟢	**7** 🟢	**7** 🟢	**5** 🟢	**5** 🟢	**-** -	**14** 🟡	**14** 🟡	**15** 🔴	**15** 🔴	**15** 🔴	**15**
Transfer Segments	3 🔴	3 🔴	3 🔴	2 🟢		- -	- -	- -	3 🔴	3 🔴	3 🔴	2 🟢	2 🟢	2 🟢	3 🔴	3 🔴	2 🟢	2 🟢	- -	3 🔴	3 🔴	3 🔴	3 🔴	3 🔴	3 🔴
Sidewalk Availability	Y 🟢	Y 🟢	Y 🟢	Y 🟢		- -	- -	- -	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	- -	N 🔴	N 🔴	Y 🟢	Y 🟢	Y 🟢	Y 🟢
Lighting Availability	Y 🟢	Y 🟢	Y 🟢	Y 🟢		- -	- -	- -	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	- -	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢	Y 🟢
Total Score																									
A	3			3		2	2	3	2			1			1		2		1	3			1		
B	1			2		1	3	3	2			1			3		1		3	1			3		
C	2			3		1	3	3	1			1			1		1		3	3			1		
D	2			2		3	3	3	3			3			2		2		2	1			1		
E	3			3		1	3	3	3			3			3		3		3	3			3		
F	3			3		1	1	3	3			3			3		3		3	3			3		
G	3			3		0	0	0	3			3			3		3		0	1			1		
H	1			3		0	0	0	1			3			1		3		0	1			1		
I	3			3		0	0	0	3			3			3		3		0	1			3		
J	3			3		0	0	0	3			3			3		3		0	3			3		
Total Score	43.5			49.5		16.0	28.0	33.0	42.5			42.5			40.5		41.5		29.0	38			36		
Percentage	83%			94%		48%	85%	100%	81%			81%			77%		79%		88%	71%			68%		

*Note that the sample parking occupation counts in the present study correspond to a discreet sample taken over a winter week. The occupation on each of the individual parking lots reflects its nearby land use profile (e.g. if it is located near sports arenas, commercial buildings, residences, etc.) and is expected to vary along the year and according to the schedule of the nearby trip attractors. Therefore the results of the study must be assessed with that in mind. A more complete assessment would require additional sampling over the course of an entire typical year.

Grade	Symbols
Excellent	🟢
Moderate	🟡
Poor	🔴

Appendix F

List of Proposed Sidewalk Gaps From 2013

Sidewalk Gap	**Implementation**	**Estimated Cost**[1]
Industrial Parkway North	0-5 years	$ 831,367
Industrial Parkway South	0-5 years	$ 1,071,641
Mary Street from Wellington Street East to Industrial Parkway South	0-5 years	$ 307,800
Adair Drive	0-10 years	Part of road reconstruction
Algonquin Crescent	0-10 years	Part of road reconstruction
Corbett Crescent	0-10 years	Part of road reconstruction
Davidson Road	0-10 years	Part of road reconstruction
Holman Crescent	0-10 years	Part of road reconstruction
Industry Street	0-10 years	Part of road reconstruction
Johnson Road	0-10 years	Part of road reconstruction
Murray Drive from Kennedy Street West to Anderson Place	0-10 years	Part of road reconstruction
Tyler Street from George Street to Mill Street	0-10 years	Part of road reconstruction
Baldwin Road	0-15 years	Part of road reconstruction
Collins Crescent	0-15 years	$ 108,000
Cousins Drive	0-15 years	$ 36,250
Hillview Road	0-15 years	$ 72,000
Kitmat Crescent	0-15 years	$ 64,800
Knowles Crescent	0-15 years	$ 114,750
Stoddart Drive – part of Cossar Drive reconstruction	0-15 years	Part of road reconstruction
Bailey Crescent	0-10 years	Part of road reconstruction
Morning Crescent	6-15 years	$ 49,500
Edward Street	0-10 years	$ 389,272
Haida Drive	0-10 years	Part of road reconstruction
Patrick Drive	6-15 years	$ 83,250
Hutchinson Road	6-15 years	$ 20,700
Webster Drive	6-15 years	$ 87,750
Harriman Road from Wellington Street to Tyler Street	6-15 years	Part of road reconstruction
Duncton Wood Crescent	16+ years	$ 123,750
Henderson Drive from Bathurst Street to Seaton Drive	16+ years	$ 205,500
Limeridge Street	16+ years	$ 90,000
Woodland Hills Boulevard	16+ years	$ 135,000
Bathurst Street[2] between north of St. John's Sideroad to Bloomington Road	0-5 years	$ 5,563,000
St. John's Sideroad[2] from Bathurst Street to Yonge Street	0-5 years	Part of road reconstruction
Bayview Avenue[2] from St. John's Sideroad to Hartwell Way and from Stone Road North Leg to Vandorf Sideroad	6-15 years	$ 841,403
Yonge Street[2] (Various Sections) from north of St. John's Sideroad to Industrial Parkway South	6-15 years	$ 1,044,000
Yonge Street[2] from Industrial Parkway South to Bloomington Road	6-15 years	Part of road reconstruction
Wellington Street[2] from Bathurst Street to MacLeod Drive	6-15 years	$ 267,900
Total		**$ 11,507,633**

Appendix G

Sidewalk Gap Map

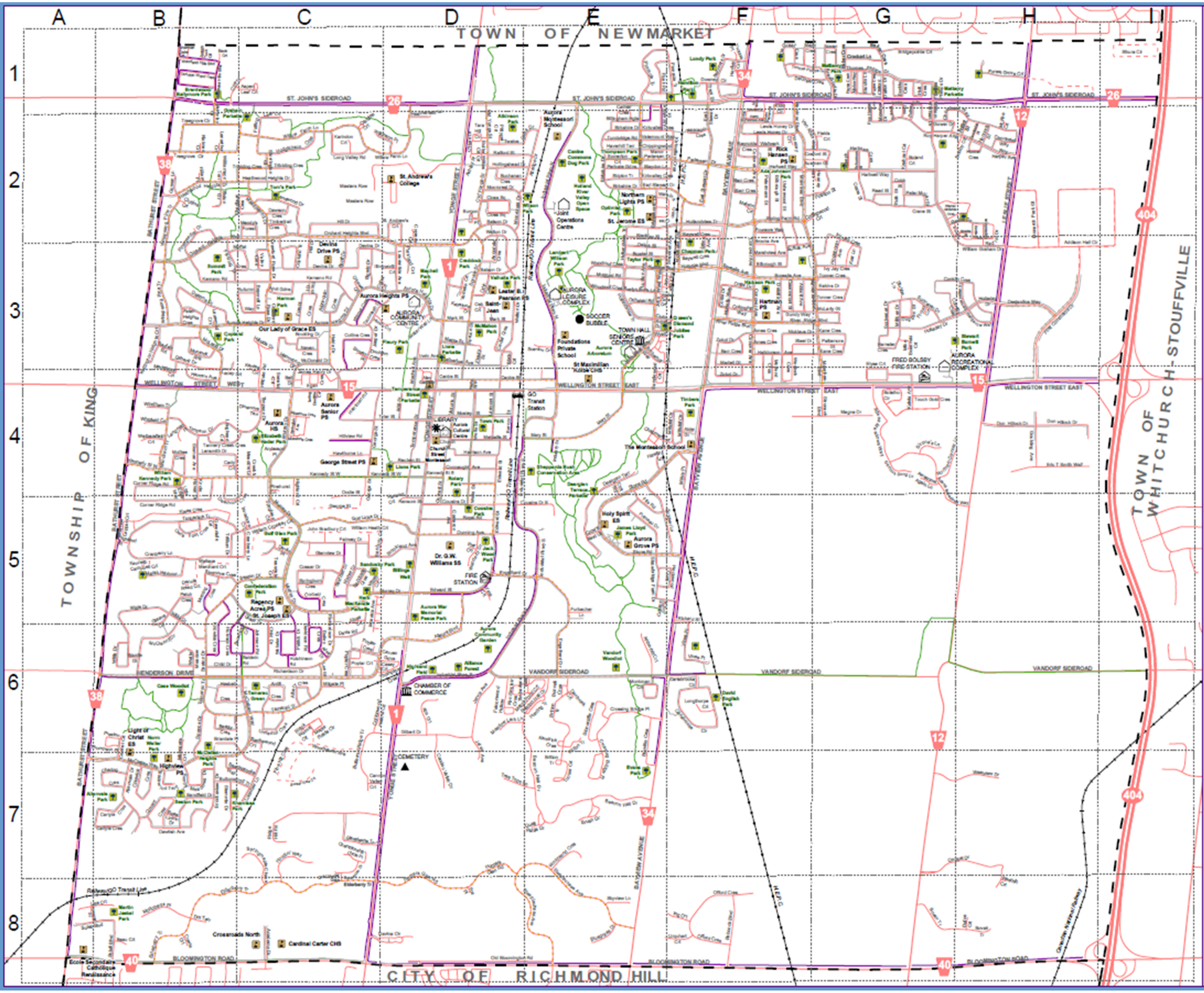
TOWN OF AURORA

SIDEWALK GAP MAP

MAP LEGEND

- Sidewalk Gaps
- Existing Sidewalk
- Bicycle Network
- Trails
- Municipal Boundary
- Highway 404
- Regional Road
- Municipal Road
- Proposed Road
- GO Transit Line/Railway
- Hydro Corridor
- School
- Parks

TOWN OF AURORA STREET INDEX



2020 SIDEWALK GAPS

STREET NAME	PROPOSED YEAR OF CONSTRUCTION	SIDEWALK GAP LENGTH (in metres)
Adair Drive	2020	80.33
Bailey Crescent	2020	231.81
Baldwin Road	n/a	83.93
Bathurst Street	n/a	6294.82
Bayview Avenue	n/a	4457.58
Berczy Street	n/a	160.08
Bloomington Road	n/a	5096.83
Collins Crescent	n/a	404.86
Corbett Crescent	n/a	264.84
Davidson Road	2020	344.34
Duncton Wood Crescent	n/a	619.00
Edward Street	2019	737.00
Harriman Road	2020	235.78
Henderson Drive	2020	678.79
Hillview Road	n/a	309.52
Holman Crescent	n/a	390.96
Hutchinson Road	n/a	89.60
Industrial Parkway North	2020	1810.55
Industrial Parkway South	2020	3086.50
Industry Street	2023	88.13
Johnson Road	n/a	361.29
Kitimat Crescent	2020	306.47
Knowles Crescent	n/a	520.57
Leslie Street	n/a	4925.82
Limeridge Street	n/a	343.77
Morning Crescent	n/a	226.64
Patrick Drive	n/a	342.35
St. John's Sideroad East	2019	4022.42
St. John's Sideroad East	n/a	1933.01
St. John's Sideroad West	n/a	4170.75
Stoddart Drive	n/a	255.73
Vandorf Sideroad	2019	362.06
Webster Drive	n/a	318.97
Wellington Street East	n/a	3167.57
Wellington Street West	n/a	603.95
Woodland Hills Boulevard	2026	561.96
Yonge Street	2020	1534.78
Yonge Street	n/a	4075.65
SIDEWALK GAP TOTAL:		*53.50 km*

For information related to municipal sidewalks, please call the Town of Aurora Planning and Development Services Department - Engineering Division at 905-727-3123 x4381

0 0.5 1
Kilometres

AURORA
You're in Good Company

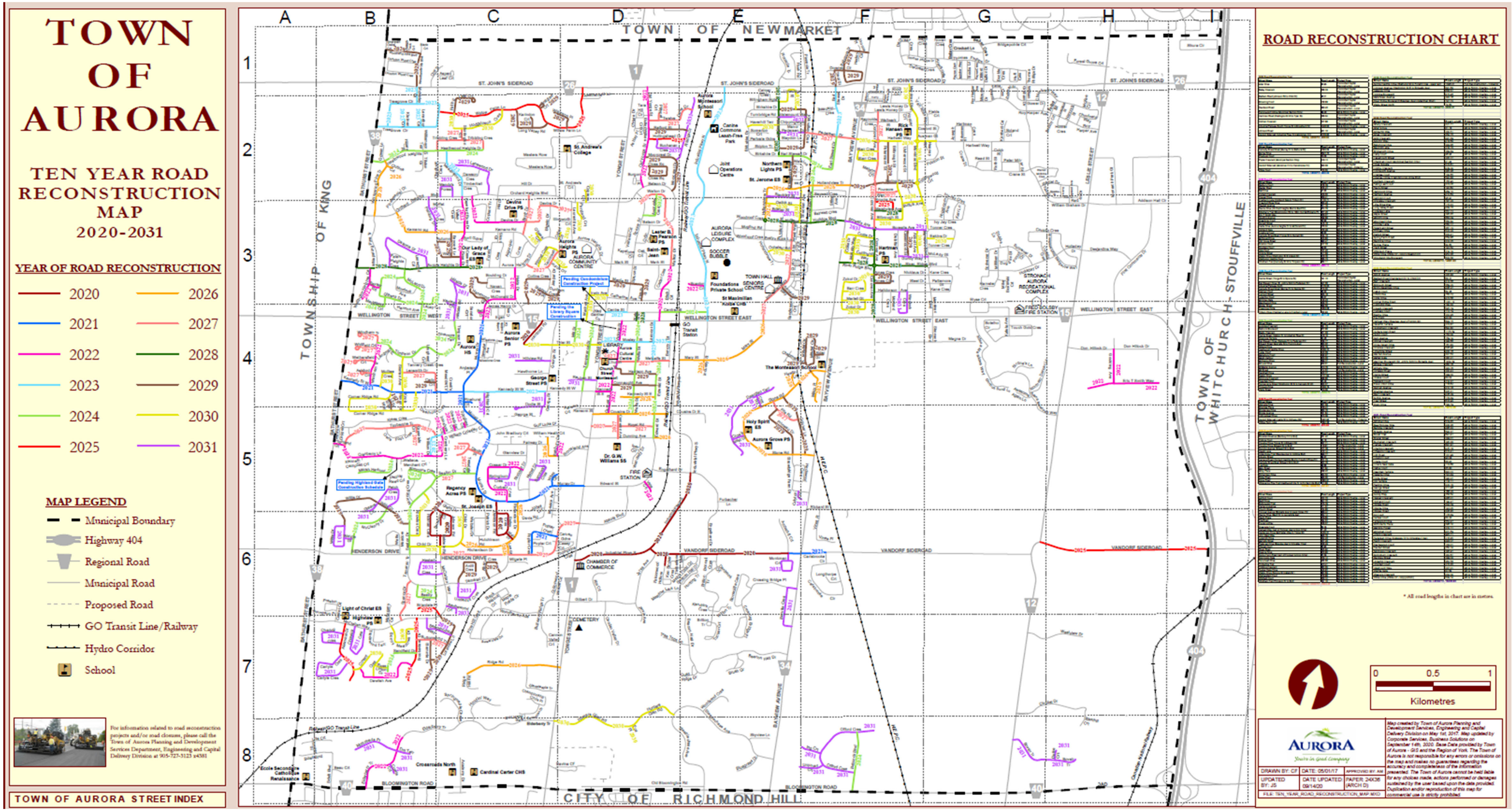
DRAWN BY: CF	DATE: 01/04/18	APPROVED BY: AM
UPDATED BY: CF	DATE UPDATED: 01/24/20	PAPER: 24X36 (ARCH D)

FILE: SIDEWALK_GAPS_MAP.MXD

Map created by Town of Aurora Planning and Development Services Department - Engineering Division, January 4th, 2018. Updated on January 24th, 2020. Base data provided by Town of Aurora - GIS and the Region of York.
The Town of Aurora is not responsible for any errors or omissions on the map and makes no guarantees regarding the accuracy and completeness of the information presented. The Town of Aurora cannot be held liable for any choices made,actions performed or damages sustained by the user based upon the data provided.

Appendix H

10-Year Road Reconstruction Map



For information related to road reconstruction projects and/or road closures, please call the Town of Aurora Planning and Development Services Department, Engineering and Capital Delivery Division at 905-727-3123 x4381

* All road lengths in chart are in metres.

Map created by Town of Aurora Planning and Development Services, Engineering and Capital Delivery Division on May 1st, 2017. Map updated by Corporate Services, Business Solutions on September 14th, 2020. Base Data provided by Town of Aurora - GIS and the Region of York. The Town of Aurora is not responsible for any errors or omissions on the map and makes no guarantees regarding the accuracy and completeness of the information presented. The Town of Aurora cannot be held liable for any choices made, actions performed or damages sustained by the user based upon the data provided. Duplication and/or reproduction of this map for commercial use is strictly prohibited.

Appendix I

Overview of York Region's Lake to Lake Vision in the Town of Aurora

Town of Aurora

Minor Future Improvements

Nokiidaa Trail Improvements

The majority of the Lake to Lake Route in Aurora runs along the existing Nokiidaa Trail. Improvements are being made to improve safety and accessibility of the Nokiidaa Trail.

1. Region to install enhanced pavement markings at St. John's Sideroad and Wellington Street East
2. Town of Aurora to improve trail crossing at Vandorf Sideroad

Appendix J

Cycling Facility Recommendations Memorandum

Memo

Date: Thursday, December 12, 2019

Project: Master Transportation Study

To: Town of Aurora

From: HDR

Subject: Cycling Facility Recommendations

Introduction

The purpose of this memorandum is to identify opportunities for new on-street cycling facilities which can be implemented in a cost-effective manner, with focus on appropriately designating space for cyclists between existing curbs. Recommendations build on the Town's existing and planned cycling network and are supported by a best practices review of design guidelines including travel and parking lane widths and considerations at intersections.

Existing Cycling Network

Based on York Region's 2017-18 Cycling Map, the cycling network in the Town of Aurora today consists of:

- Off-road multi-use trail
- Shared pathway in-boulevard
- Bike lane
- Paved shoulder
- Shared roadway

It is noted that the majority of routes on Town roads are shared roadways without any dedicated space along collector roads and local roads. The existing network of off-road multi-use trails are found within the natural heritage areas within residential subdivisions west of Yonge Street, and a continuous multi-use trail east of Yonge Street which is part of York Region's Lake to Lake Cycling Route and Walking Trail. The Lake to Lake Route is a proposed 121km recreational and commuter trail connecting Lake Simcoe to Lake Ontario. In Aurora, the Lake to Lake Route extends north-south through the Town from generally between Industrial Parkway and Bayview Avenue, meeting Bayview Avenue just south of Vandorf Sideroad. It is noted that the on-street portion of the Lake to Lake Route along Bayview Avenue has yet to be implemented. **Figure 1** illustrates the Town of Aurora cycling network from the 2017-18 York Region Cycling Map. **Table 1** provides a description of cycling facility types and identifies sample locations of the cycling facility types in the Town of Aurora.

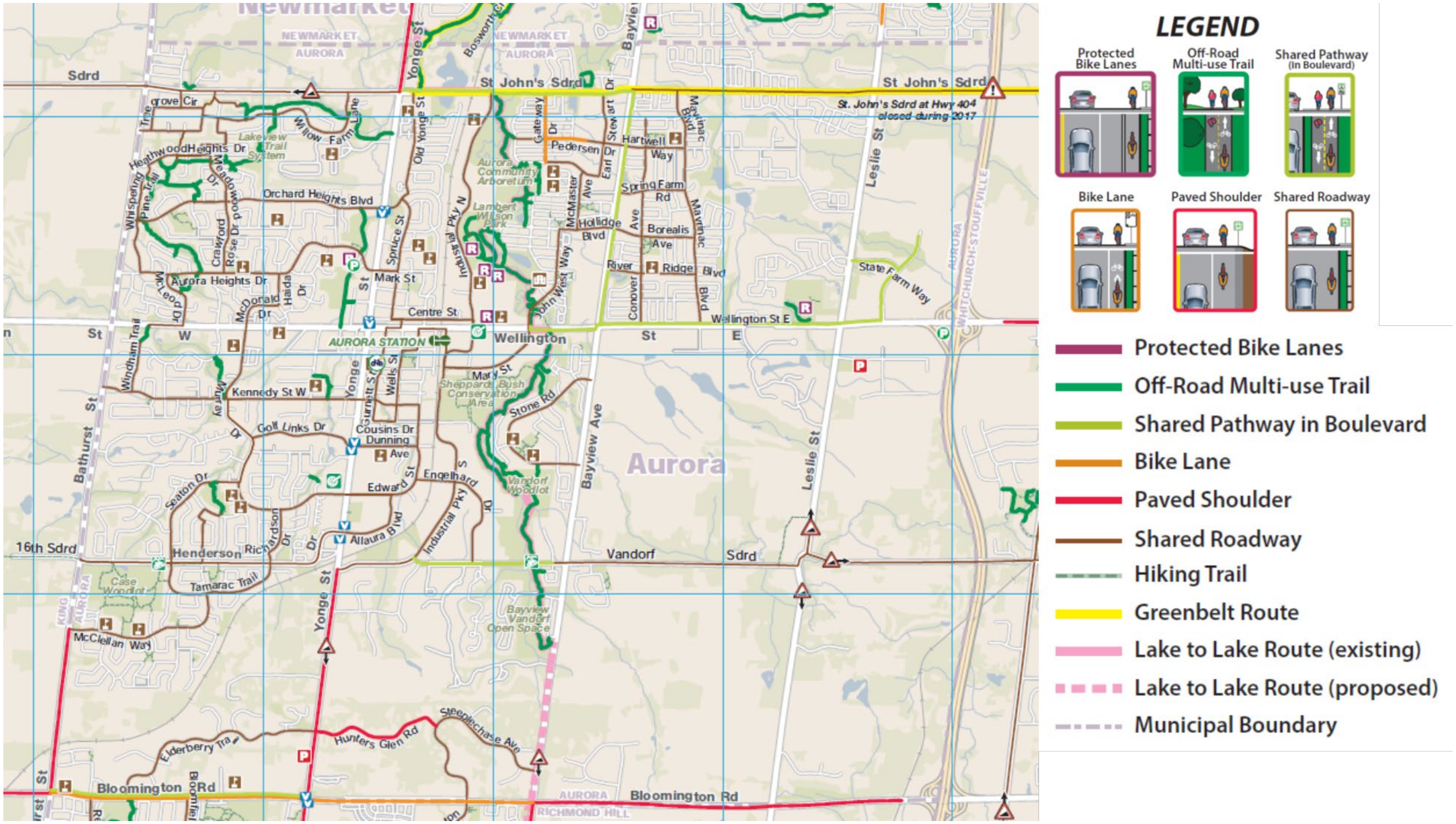
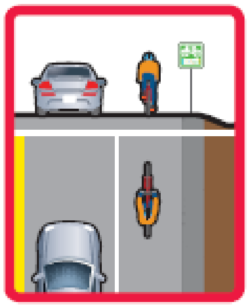
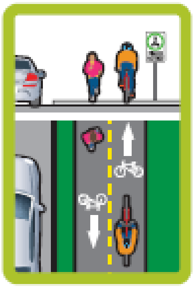
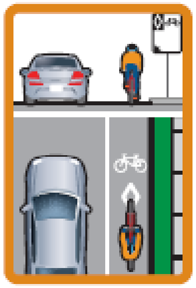


Figure 1: 2017-18 York Region Cycling Map

Source: York Region

Table 1: Town of Aurora Existing Cycling Facilities

Facility Type	Street	Extent
Paved Shoulder  Image Source: York Region	Yonge Street	Blackforest Drive (Richmond Hill) to Industrial Parkway (Aurora)
	Yonge Street	St. John’s Sideroad (Aurora) to Shoniker Drive (Newmarket)
	Bloomington Road	Bayview Avenue to GO Rail Tracks (Highway 404)
	Hunter’s Glen Road	Yonge Street to Steeplechase Avenue
	Bathurst Street	Bloomington Road to McClellan Way
Shared Pathway in Boulevard  Image Source: York Region	St. John’s Sideroad	Yonge Street to Bayview Avenue
	Baview Avenue	St. John’s Sideroad to Wellington Street E
	Wellington Street E.	Mary Street/John West Way to First Commerce Drive
	First Commerce Drive	Wellington Street E. to State Farm Way
	State Farm Way	Leslie Street to First Commerce Drive
	Vandorf Sideroad	Industrial Parkway to Archerhill Court
Bike Lane  Image Source: York Region	Gateway Drive	St. John’s Sideroad to Earl Stewart Drive
	Pedersen Drive	Gateway Drive to west of Earl Stewart Drive
	Bloomington Road	Bathurst Street to Bayview Street

Planned Cycling Network

Building on the existing cycling network in the Town of Aurora, recommended improvements should be informed by the Town of Aurora’s Official Plan (OP), Trails Master Plan and Design Criteria Manual, the previous 2013 Master Transportation Operations Study (MTOS), and other best practice guides.

The key goals of the Trails Master Plan are to:

- Improve connections between existing trails;
- Provide new trails and connections between residential areas, schools, commercial, industrial and institutional establishments, parks, green-spaces, and natural areas;

- Create a connected network of trails to provide Aurora's residents with active and healthy lifestyle options; and,
- Provide the ability to travel throughout the Town with ease and opportunities to experience nature without having to rely on a vehicle.

Figure 2 illustrates recommended cycling and trails network from the 2013 Master Transportation Operations Study and **Figure 3** illustrates the Town's Official Plan Trail Network Concept, which highlights the existing and future trails network.

Both of these documents will be used to inform recommendations within this memo. New opportunities to better connect to the Town's off-road trails, building upon the Trails Master Plan direction will also be considered.

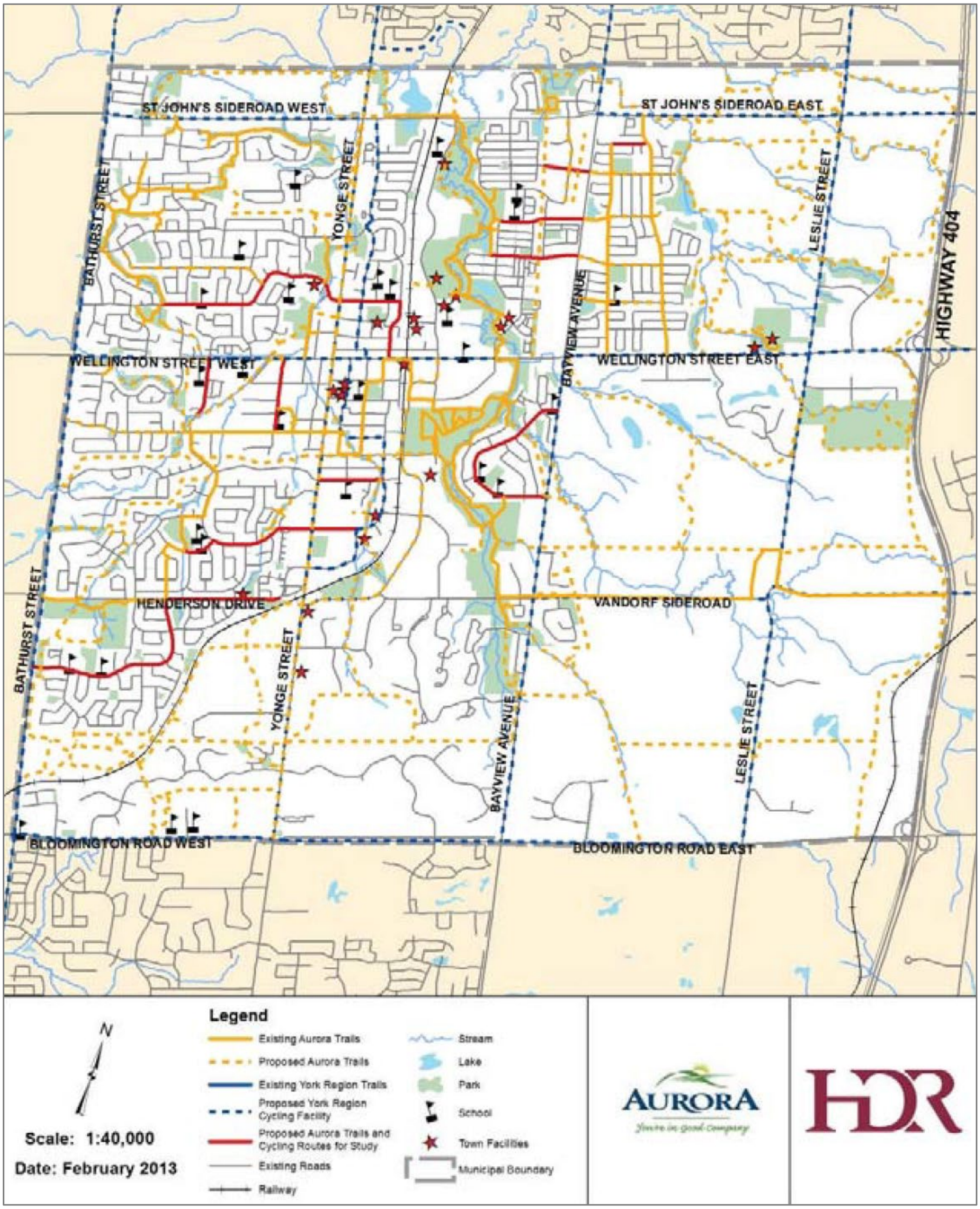
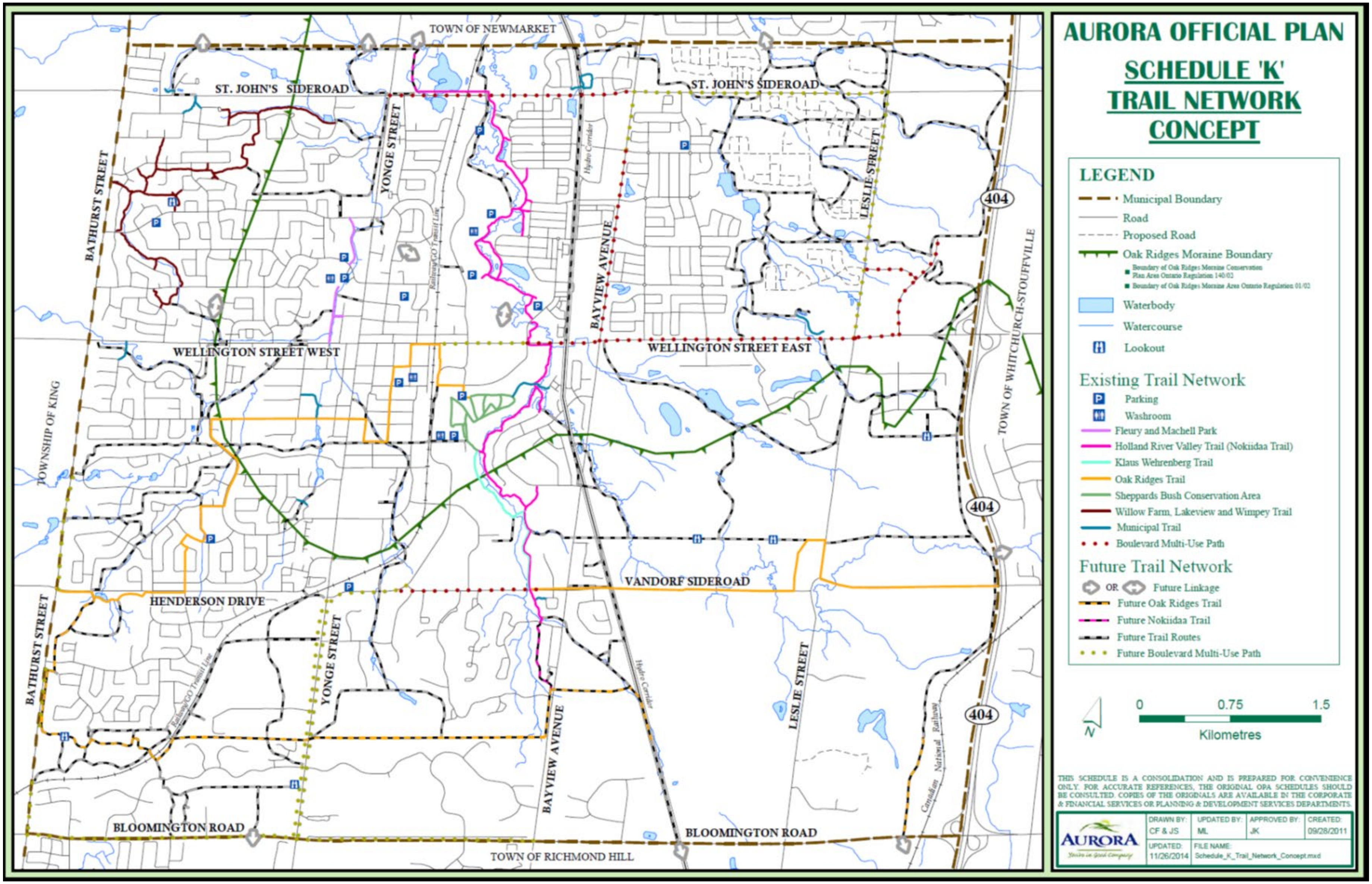


Figure 2: Town Trail and Cycling Routes, 2013 MTOS



THIS SCHEDULE IS A CONSOLIDATION AND IS PREPARED FOR CONVENIENCE ONLY. FOR ACCURATE REFERENCES, THE ORIGINAL OPA SCHEDULES SHOULD BE CONSULTED. COPIES OF THE ORIGINALS ARE AVAILABLE IN THE CORPORATE & FINANCIAL SERVICES OR PLANNING & DEVELOPMENT SERVICES DEPARTMENTS.

Figure 3: Aurora Official Plan – Schedule 'K' Trail Network Concept

Methodology to Identify New Cycling Facilities

As seen in **Figure 1**, the existing network of on-street cycling facilities consists primarily of shared roadways. Providing dedicated space for cyclists will encourage cycling as a viable transportation mode while also accommodating other new, sustainable mobility options. Specifically, we note that the Province is implementing a five year pilot program to allow electric scooters on Ontario roadways wherever bicycles are allowed, beginning January 1, 2020.

The identification of feasible new cycling facilities will focus on the currently identified shared routes (which largely mirror the routes identified in the 2013 MTOS and Official Plan). Considerations for cycling facilities will include:

1. Vehicular travel lane widths
2. Dedicated on-street parking lane widths
3. Cycling facility guidance
4. Cycling facility types and widths
5. Available pavement width to implement a cost-effective solution

Vehicular Travel Lanes

TAC Geometric Design Guide for Canadian Roads, *Chapter 4 – Cross Section Elements*, provides the recommended range of through lane widths for rural and urban roadways and is summarized in **Table 2**.

Table 2: TAC Recommended Lane Widths

Roadway Type	Design Speed (km/h)	Practical Lower Limit	Recommended Lower Limit	Recommended Upper Limit	Practical Upper Limit
Rural Roadway (Design Hour Directional Volumes <=450)	60 and less	2.7m	3.0m	3.7m	4.0m
	70 to 100	3.3m	3.5m	3.7m	4.0m
	110 and Higher	3.5m	3.5m	3.7m	4.0m
Rural Roadway (Design Hour Directional Volumes >450)	60 and less	3.0m	3.5m	3.7m	4.0m
	70 to 100	3.5m	3.5m	3.7m	4.0m
	110 and Higher	3.5m	3.7m	3.7m	4.0m
Urban Roadway	60 and less	2.7m	3.0m	3.7m	4.0m
	70 to 100	3.0m	3.3m	3.7m	4.0m
	110 and Higher	3.5m	3.7m	3.7m	4.0m

Source: Transportation Association of Canada Geometric Design Guide for Canadian Roads Manual 2017

In general, the Town roads where cycling facilities are being considered are rural, low volume roadways or urban roadways with design or posted speeds 60km/h or less, and thus 3.0m vehicular travel lanes are generally used in this analysis.

Dedicated On-street Parking Lanes

Parking lanes are typically provided on urban roadways to clearly delineate space for parking, in order to maintain safe and convenient operations for vehicular traffic. On the residential collector roads in the Town of Aurora, on-street parking is typically allowed but designated spaces are not typically identified. With the implementation of dedicated cycling facilities it may be necessary to delineate where on-street parking is allowed.

With respect to widths, according to TAC, Chapter 4 – *Cross Section Elements*, the width of a parking lane should be generally 2.4m. Based on the National Association of City Transportation Officials (NACTO) and the City of Toronto Road Engineering Design Guidelines, on-street parking lane widths are recommended to be between 2.0m to 2.8m wide. Dedicated parking lanes should only be wider than 2.4m where there is a high volume of parked trucks or the horizontal alignment curve prevents vehicles from parking within a 2.4m wide parking lane.

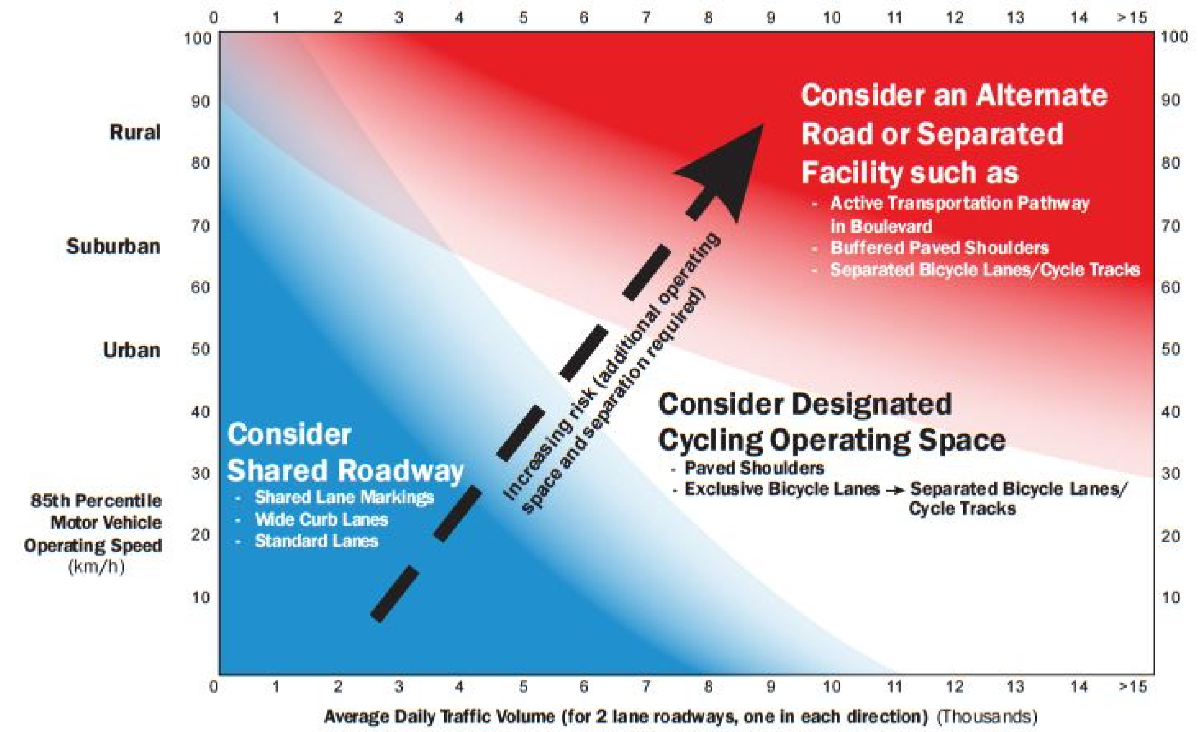
In the low volume and speed residential applications in the Town of Aurora, a 2.0m minimum width is appropriate while a width of 2.4m is considered for higher volume roadways.

Cycling Facility Guidance

OTM Book 18, *Cycling Facilities*, provides guidance in determining the preferred cycling facility for the different road types throughout the Town as a function of vehicle travel speed and average annual daily traffic (AADT) volumes. **Figure 4** illustrates the graph used to select the desired cycling facility and is based on vehicular travel speeds and Annual Average Daily Traffic (AADT) volumes.

On the residential streets within the Town posted at 40km/h to 50km/h, AADT volumes less than 5,000 do not require dedicated cycling facilities, while AADT volumes greater than 5,000 should strongly consider dedicated cycling facilities. At speeds of 50km/h, dedicated cycling facilities remain appropriate, but at higher volumes, greater separation through buffer widths for example should be considered where space is available.

In general, separated cycling facilities are ideal in the creation of an “All Ages and Abilities” or AAA cycling network, however space and cost considerations can be barriers to implementation. It is further noted that implementing lower-order facilities than recommended by OTM Book 18 should be avoided; however, implementing higher-order facilities is encouraged if warranted based on the factors previously identified.



Footnotes:
- This nomograph is the first of a three step bicycle facility selection process,, and should not be used by itself as the justification for facility selection (see Steps 2 and 3). The nomograph simply helps practitioners pre-select a desirable cycling facility type, however the context of the situation governs the final decision.
- The nomograph has been adapted for the North American context and is based on international examples and research for two lane roadways. It is, however, still applicable for multi-lane roadways. For these situations, designers should consider the operating speed, total combined traffic volume and traffic mix of the vehicles traveling in the lanes immediately adjacent to the cycling facilities.
- Consider a Separated Facility or an Alternate Road for roadways with an AADT greater than 15,000 vehicles and an operating speed of greater then 50 km/h.
- For rural and suburban locations this nomograph assumes good sightlines are provided for all road users. In urban areas, there are typically more frequent conflict points at driveways, midblock crossings and intersections (especially on multi-lane roads), as well as on road segments with on-street parking. This needs to be considered when assessing risk exposure in urban environments since it will influence the selection of a suitable facility type.

Figure 4: OTM Book 18 Bicycle Infrastructure Nomograph

Cycling Facility Types and Widths

BICYCLE LANES

Bicycle lanes are on-road facilities designated by pavement markings and signage. Bicycle lanes are typically on the right side of the street between the vehicle travel lane and curb or parking lane, and flow in the same direction of traffic. **Buffered bicycle lanes** offer an enhancement by using painted buffers to provide additional space between motor vehicles and cyclists.

Table 3, adopted from OTM Book 18, illustrates minimum widths. Bicycle lanes immediately adjacent to parking should only be implemented if the desired width can be accommodated. Where space allows, bicycle lanes may be wider to provide additional comfort to cyclists.

Table 3: Bicycle Lane Width

Facility	Desired Width	Suggested Minimum
Curbside lanes	1.8m	1.5m
Lanes adjacent to parking	1.5m lane + 1m buffer	1.5 m lane + 0.5m buffer

CYCLE TRACKS

Cycle tracks are an exclusive bicycle facility adjacent to and at the same level as the roadway, but separated from motorized traffic by a physical buffer (e.g. planters, bollards, curbs, or a parking lane). They can be bi- or uni-directional, and designed to accommodate cyclists on one or both sides of the street. **Raised cycle tracks** are physically separated from motorized traffic by a height difference. They may be at the level of the adjacent sidewalk or at an intermediate level between the roadway and sidewalk. The desired width for a one-way raised cycle track is 2m, and the minimum 1.5m. **Table 4**, adopted from OTM Book 18, illustrates minimum widths:

Table 4: Protected Bicycle Facility Width

Facility	Desired Width	Suggested Minimum
Flexible bollards	2.0m lane + 1.2m buffer	1.5m lane + 0.5m buffer
Planters / Concrete curb	2.0m lane + 1.2m buffer	1.8m lane + 0.5m buffer
On-street parking	1.8m lane + 1.2m buffer	1.5m lane + 0.8m buffer

MULTI-USE TRAILS

Multi-use Trails (MUT) are off-road facilities, fully separated from motorized traffic by a boulevard or paved surface, or passing through parks and other natural spaces. They often serve commuter and recreational functions. They are typically shared between pedestrians, cyclists, rollerbladers, and skateboarders. The desired width of a multi-use trail is 4.0m, and the minimum width is 3.0m.

SHARED LANE MARKINGS (SHARROWS)

Sharrows are road markings that indicate a shared lane for bicycles and vehicles. It is a pavement marking that indicates a variety of uses to support a complete bikeway network; however, it is not a facility type. Sharrows are typically implemented to reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and maybe configured to offer directional wayfinding guidance. They should not be considered a substitute for bike lanes, cycle tracks, or multi-use trails where these types of facilities are a warranted or space permits.

URBAN SHOULDER

An urban shoulder is a space, delineated by an edge line that a cyclist may ride in instead of riding in the vehicular shared lane where dedicated cycling facilities are not provided. An urban shoulder is not an alternative to a dedicated cycling facility and may be used for snow storage in the winter. Based on the City of Toronto Road Engineering Design Guidelines, the minimum width of an urban shoulder delineated by an edge line shall be 1.2m and may be as wide as 2.3m where space is available.

Available Pavement Width

A review of the available pavement width on each of the shared cycling routes identified in **Figure 1** has been conducted to inform the recommendations, to consider for cycling facilities. The measured widths are identified in **Table 5**. It is noted that this information is based on Google Maps, and is provided for conceptual network planning only. Further study is required to confirm recommendations based on these available pavement widths.

Table 5: Available Pavement Width for Shared Roadways

Road with existing Shared Roadway Designation (York Region Cycling Map 2017-2018)	Available Pavement Width, Urban Cross-section unless noted otherwise
Kennedy Street	6
Henderson Drive	11
Seaton Drive	8
Glass Drive	8
Baldwin Road	8
Browning Court	7.5
Johnson Road	8.5
Holman Crescent	8.5
Murray Drive, Wellington St to Golf Links Dr	9.5
Murray Drive, Golf Links Drive to Seaton Dr	13.5
Murray Drive, Seaton Dr to Yonge St	9.5
Treegrove Cir	8.5
Heathwood Heights Drive	8.5
Whispering Pine Trail	9
Meadowood Drive	8.5
Crawford Rose Dr	8.5
Aurora Heights Dr (Whispering Pine Tr to Foreht Cres)	10
Aurora Heights Dr (Foreht Cres to Yonge St)	8.5
McLeod Dr	8.5
Windham Trail	8.5
Haida Drive	9
McDonald Drive	10
Orchard Heights Blvd	10
Willow Farm Lane	9
Golf Links Drive	8
Mark Street	8.5
Richardson Dr	8.5
Tamarac Trail	8.5
McClellan Way	12
Allaura Blvd	11
Edward St	10
Dunning Avenue	10
Cousins Drive	8.5
Gurnett St	8.5
Wells St	8.5
Engelhard Drive	11
Industrial Pkwy S	11

Road with existing Shared Roadway Designation (York Region Cycling Map 2017-2018)	Available Pavement Width, Urban Cross-section unless noted otherwise
Mary Street	9
Stone Rd	10
Centre Street	8
Batson Street	8.5
Spruce Street	8
Old Yonge St	8.5
Industrial Pkwy N	11
John West Way	11
Hollidge Blvd	Existing bike lane behind curb
McMaster Ave	8.5
Earl Stewart Dr	11
Penderson Dr	11
Hartwell Way	11
William Graham Drive	10
Holladay Drive	8.5
Mavrinac Blvd	11
Spring Farm Rd	11
Borealis Ave	11
River Ridge Blvd	8.5
Conover Ave	11
Vandorf Sdrd, 60m east of Carisbrooke Circle to Leslie Street	Rural – existing paved shoulder
Vandorf Sdrd, Archerhill Court to 60m east of Carisbrooke Circle	Rural – no available pavement
Steeplechase Ave	Rural – 3m lanes, 1.3m paved shoulder on one side
Elderberry Trail	Rural – 3m lanes, 1.3m paved shoulder on one side
St. John's Sdrd, Bathurst St to Yonge St	Rural – 3.75m lanes, 1m shoulders. Planned bike lane or paved shoulder - York Region TMP.

Potential Cycling Facilities

The Town of Aurora has four standard right-of-way (ROW) drawings for residential roads (R-209 to R-212) and two standard ROW drawings for industrial roads (R-213 and R-214).

Based on Aurora's standard ROW drawings and available pavement width identified previously, recommendations for different cycling facility options are identified in **Table 6**. The options are intended to be applied within the existing pavement width, and varying requirements for parking or cycling facility separation should be applied depending on the land use context.

Sample cross-sections illustrating some of these cycling facility options are provided in **Appendix A**.

Table 6: Standard ROW and Potential Cycling Facilities

Drawing #	Existing Condition		Cross-Section Element Options		
	Drawing Name	Urban Curb to Curb Pavement Width	Vehicle Lanes	Parking	Potential Cycling Facility
R-209	Typical 18m Residential ROW	8.0m	4.0m	Not dedicated	Sharrows / signed route
			2.8m	Not dedicated – 1.2m urban shoulder	Not dedicated – 1.2m urban shoulder
R-210	Typical 20m Residential ROW	8.5m	4.25m	Not dedicated	Sharrows / signed route
			3.0m	Not dedicated – 1.25m urban shoulder	Not dedicated – 1.25m urban shoulder
			3.25m	2.0m, one side	Sharrows / signed route
R-211	Typical 23m Residential ROW	11.0m	3.0m	None	2.0m Bicycle Lane or raised cycle track, 0.5m buffer each side
			3.5m	2.0m, both sides	Sharrows / signed route
			2.7m	2.0m, one side	1.5m Bicycle Lane on each side, 0.6m buffer between parking and Bicycle lane
R-212	Typical 26m Residential ROW	11.0m	See 3 options for R-211		
			3.0m	2.5m, both sides	3.0m MUT on both sides (replace sidewalk)
			3.0m	2.5m, both sides	1.5m cycle track on both sides, adjacent to sidewalk
R-213	Typical 20m Industrial ROW	10.5m	3.0m	None	1.5m + 0.75m buffered Bicycle Lane on each side

Drawing #	Existing Condition		Cross-Section Element Options		
	Drawing Name	Urban Curb to Curb Pavement Width	Vehicle Lanes	Parking	Potential Cycling Facility
R-214	Typical 23m Industrial ROW	11.0m	3.0m	None	2.0m + 0.5m buffered Bicycle Lane on each side
Other non-standard pavement width	n/a	9.0m	3.0m	None	1.5m Bicycle Lane on each side
		9.0m	4.5m	Not dedicated	Sharrows / signed route
		10.0m	3.0m	None	1.5m + 0.5m buffered Bicycle Lane on each side
		10.0m	5.0m	Not dedicated	Sharrows / signed route

Recommendations

Based on available pavement width, a recommendations map identifies proposed cycling facilities on the bike routes throughout the Town and is illustrated in **Figure 6**. As noted previously, these recommendations are based upon available pavement width information from Google Maps. Further study is required to confirm recommendations based on more detailed information about available pavement widths.

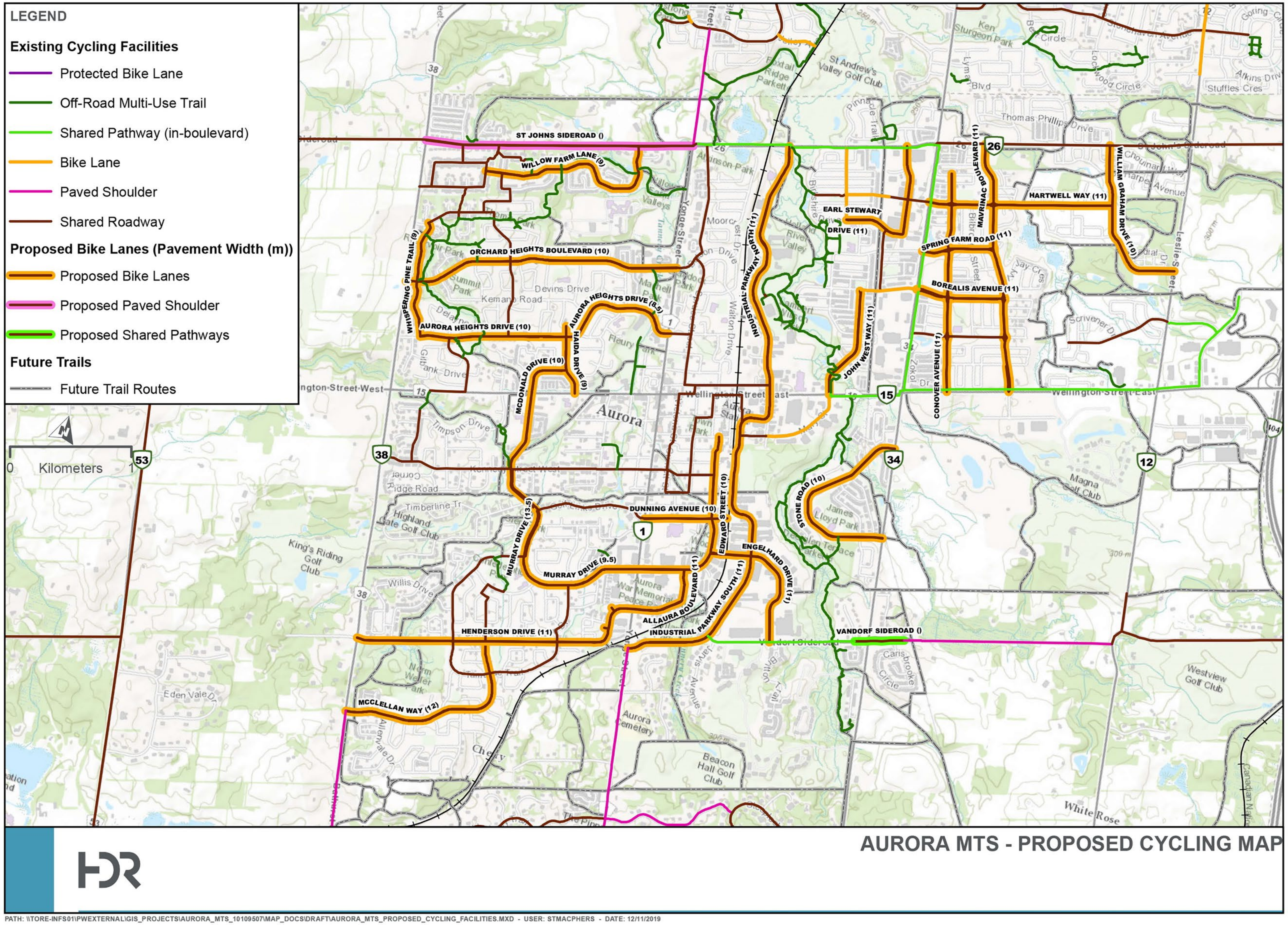


Figure 5: Recommended Cycling Facilities

Case Studies for Consideration

Upon review of Schedule 'K' – Trail Network Concept of the Town's Official Plan, it was found that not all existing conditions are accounted for in the above standard ROW drawings. Using the Oak Ridges Trail between Bathurst Street and Yonge Street as an example, the existing cross-sections have been reviewed for the following streets:

1. Henderson Drive (11.0m pavement, urban)
2. Baldwin Road, Glass Drive, Seaton Drive (8.0m pavement, urban)
3. Browning Court (7.5m pavement, rural)
4. Johnson Road, Holman Crescent (8.5m pavement, rural)
5. Murray Drive north of Seaton Drive to Golf Links Drive (13.5m pavement, urban)
6. Murray Drive north of Golf Links Drive to Kennedy St (9.5m pavement, urban)
7. Kennedy Street West (6.0m pavement, urban)

Based on the above, the Browning Court, Murray Drive, and Kennedy Street examples demonstrate that there are exceptions in pavement widths on existing roadways.

Cycling Facility Selection

Utilizing the OTM graph to select the desired cycling facility, **Table 7** summarizes the Annual Average Daily Traffic (AADT) volumes and vehicular travel speeds on each street, as well as the recommended cycling facility. AADT volumes and 85th percentile speeds were obtain from the Town. Data was not available for Baldwin Drive, Browning Court, Johnson Road, and Holman Crescent; however, given the length and configuration of these roads, it is assumed that traffic volumes are relatively low and only serve the residents on these streets.

Table 7: OTM Recommended Cycling Facility

Street Name	AADT Volume	Posted Speed Limit (km/h)	85th Percentile Speed (km/h)	OTM Cycling Facility Recommendation
Henderson Drive	4,470	50	59	Between shared roadway and exclusive bike lanes
Baldwin Road				
Glass Drive	1,149	40	51	Shared roadway
Seaton Drive	1,570	40	52	Shared roadway
Browning Court				
Johnson Road				
Holman Crescent				
Murray Drive	6,459	40	53	Exclusive bike lanes
Kennedy Street	3,772	40	58	Shared roadway
Vandorf Sideroad (at Bayview Avenue)	5,000-9,000*	60	n/a	Separated facility

*Based on York Region EMME Model estimate, 2016 Base Model

Roadway Retrofit Design

Considering OTMs recommended cycling facilities as well as the design criteria for roadways listed in the Design Guidelines section of this memo, the following cycling facilities are recommended:

HENDERSON DRIVE

Henderson Drive is classified as an urban arterial road that has a typical 26.0m right-of-way (ROW), with some sections of the road at 25.0m. The road extends east-west from Bathurst Street to Yonge Street. There are two lanes of traffic with sidewalks on both sides. **Figure 7** illustrates the existing Henderson Drive ROW.

The posted speed limit is 50 km/h with an 85th percentile speed of 59km/h, and has an estimated daily average traffic volumes of approximately 4,470 vehicles. Based on the guidelines set out in OTM Book 18, Henderson Drive falls between a shared roadway and paved shoulders or exclusive bicycle lanes. Based on **Table 6** above, a 26.0m right-of-way with a pavement width of 11.0m can accommodate the following options:

- **Option 1:** 2.0m Bicycle Lane or raised cycle track, 0.5m buffer each side
- **Option 2:** 2.0m Parking Lane both sides with Sharrows
- **Option 3:** 2.0m Parking Lane one side with 1.5m Bicycle Lane on each side
- **Option 4:** 2.5m Parking Lane both sides with 3.0m MUT on both sides (replace sidewalk)
  Option 5: 2.5m Parking Lane both sides with 1.5m cycle track on both sides, adjacent to sidewalk

Figure 6: Existing Henderson Drive ROW

As the majority of properties back onto Henderson Drive, there is no demand for on-street parking along this corridor. Moreover, traffic volumes along Henderson Drive do not warrant higher order cycling facilities such as MUTs and cycle tracks. It is recommended to install 2.0m a Bicycle Lane or raised cycle track with a 0.5m buffer on each side as illustrated in **Figure 8**.

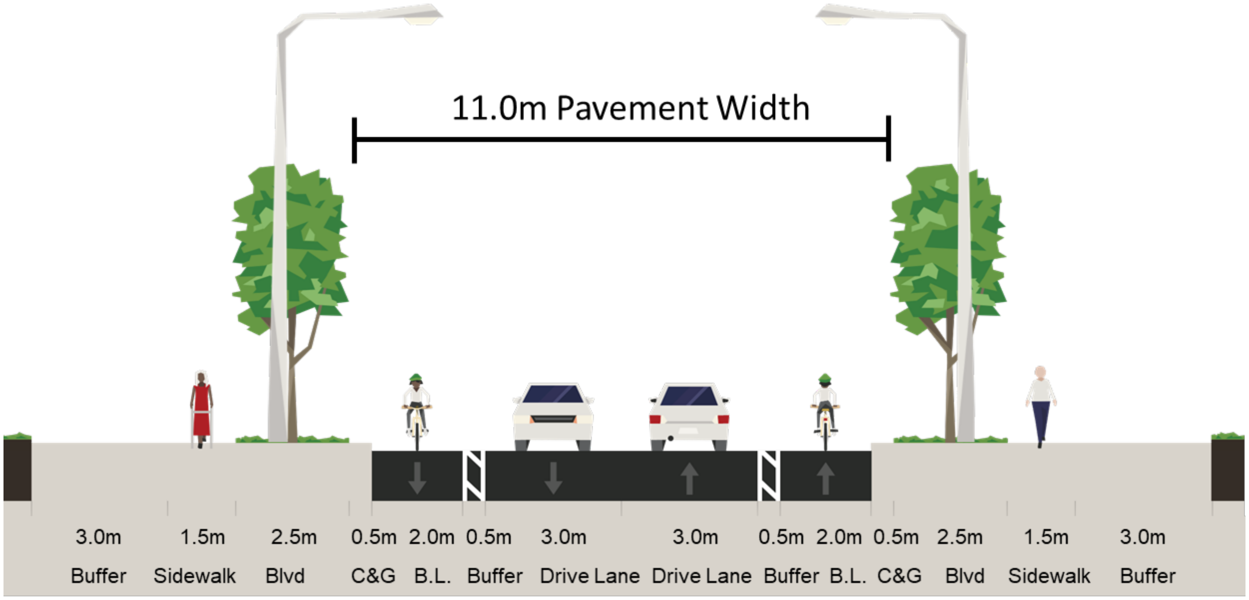


Figure 7: Henderson Drive with 2.0m Bicycle Lanes

BALDWIN ROAD, GLASS DRIVE, AND SEATON DRIVE

Baldwin Road is classified as a local urban road with a typical 18.0m ROW and 8.0m pavement width. It is a north-south road approximately 160m in length and extends from Henderson Drive to Holman Crescent/Johnson Road. Parking is permitted on both sides of the road; however, it is not dedicated. **Figure 9** illustrates the existing Baldwin Road ROW.

Glass Drive and Seaton Drive are classified as local urban roads with a 20.0m ROW and 8.0m pavement width, which is not typical of a 20.0m ROW.

Glass Drive It is an east-west road and extends approximately 60.0m from Seaton Drive to Murray Drive and has sidewalks on both sides, which provides direct access to Confederation Park as illustrated in **Figure 10**. Parking is permitted on the south side with timed restrictions across from St. Joseph's Catholic Elementary school. A parking lay-by area is provided on the north side of the road in front of the school.

Seaton Drive is a north-south road that extends from Henderson Drive to Murray Drive and provides a sidewalk on the east side of the road as illustrated in **Figure 11**. Parking is permitted on the east side of the road.

Based the AADT data and 85th percentile speeds along Glass Drive and Seaton Drive, OTM Book 18, recommends a shared roadway for cyclists.

For a right-of-way with a pavement width of 8.0m the following options can be accommodated:

- **Option 1:** Sharrows with non-dedicated parking
- **Option 2:** 1.2m Urban Shoulder with non-dedicated parking

Figure 8: Existing Baldwin Road ROW

Figure 9: Existing Glass Drive ROW

Figure 10: Existing Seaton Drive ROW

It is recommended to provide 1.25m Urban Shoulders on both sides of the road. This will provide cyclists a defined space to ride to keep them separated from vehicles. This space is not a designated bicycle lane and may be used for parking and snow storage in the winter. Parking restrictions along Glass Drive and Seaton Drive are recommended to remain as existing conditions. **Figure 12** illustrates the recommended cross-section for Baldwin Road, Glass Drive, and Seaton Drive.

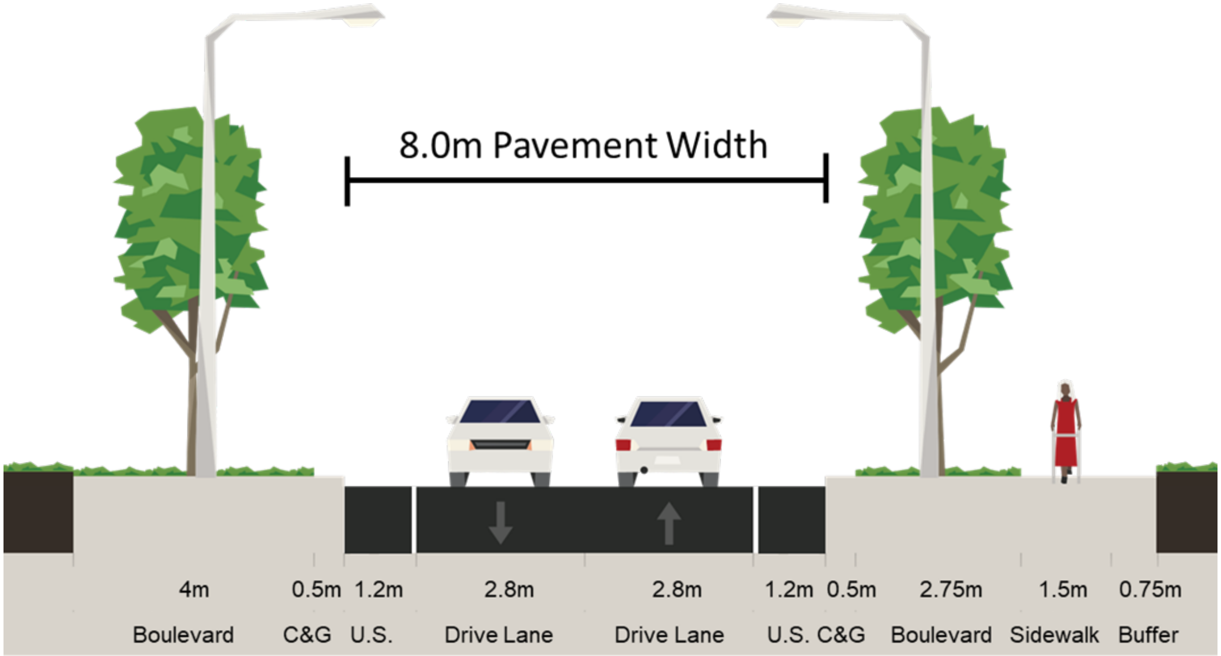


Figure 11: Urban Shoulders on Baldwin Road, Glass Drive, and Seaton Drive

JOHNSON ROAD / HOLMAN CRESCENT

Johnson Road / Holman Crescent are classified as local rural roads with a typical 20.0m ROW and 8.5m pavement width. **Figure 13** illustrates the existing ROW for Johnson Road / Holman Crescent and shows the intersection where the two roads meet. Parking is permitted on both sides of the road. Based on the proposed sidewalk construction plan, sidewalks along Johnson Road / Holman Crescent are proposed to be constructed in 2019.

Based on **Table 6** above, a 20.0m right-of-way with a pavement width of 8.5m can accommodate the following options:

- **Option 1:** Sharrows with non-dedicated parking
- **Option 2:** 1.25m Urban Shoulder with non-dedicated parking
- **Option 3:** Sharrows with a 2.0m dedicated parking lane on one side

As a portion of Johnson Road and Holman Crescent are identified as part of the Oak Ridges Trail, the two roads should provide Urban Shoulders to provide wayfinding along the trail. **Figure 14** illustrates the recommended cross-section for Johnson Road and Holman Crescent. Similar to Baldwin Road this space will provide a defined space of cyclists to ride, but is not a designated bicycle lane and may be used for parking and snow storage in the winter.

Figure 12: Existing Johnson Road / Holman Crescent ROW

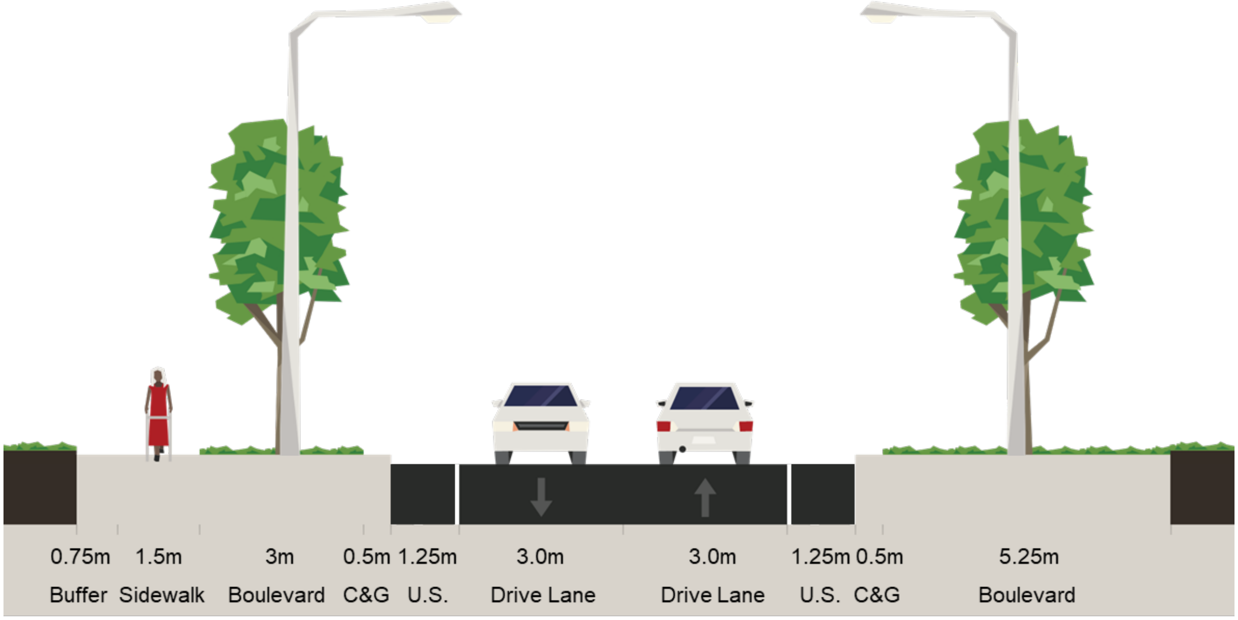


Figure 13: Johnson Road / Holman Crescent with Urban Shoulders

BROWNING COURT

Browning Court is a road off of Johnson Road that has no vehicular exit. It is classified as a local rural road with a 20.0m ROW and 8.0m pavement width and permits parking on both sides of the road. Browning Court is designated as part of the Oak Ridges Trail, which is connected to Baldwin Road by a pedestrian/cyclist path. **Figure 15** illustrates the existing Browning Court ROW. As Browning Court is only approximately 100m in length, sharrow markings are recommended to provide wayfinding for Oak Ridges Trail users. Parking is recommended to be maintained on both sides of the road. **Figure 16** illustrates the recommended lane markings for Browning Court.

Figure 14: Existing Browning Court ROW

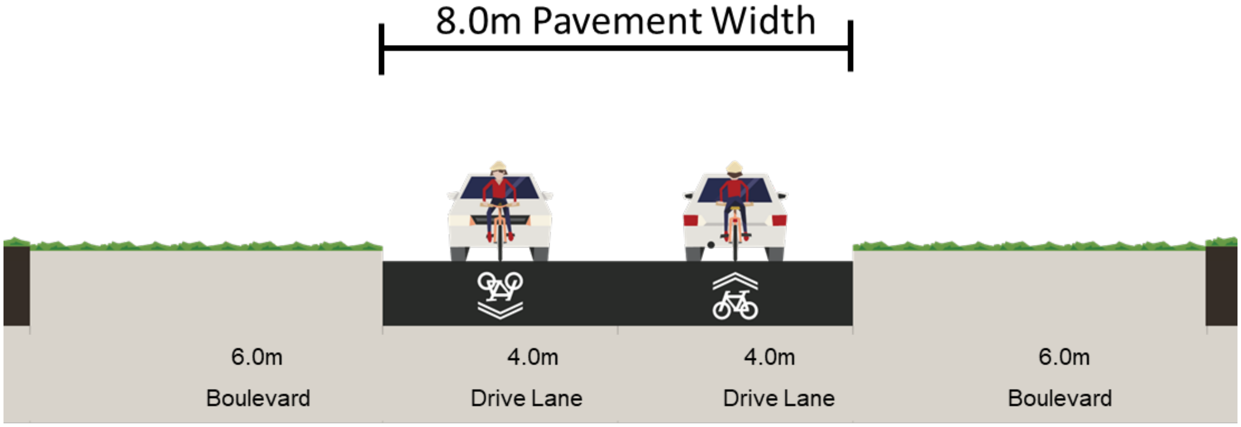


Figure 15: Browning Court with Sharrows

MURRAY DRIVE

Murray Drive is classified as a local urban road with a 26.0m ROW and sidewalks on both sides. The pavement width North of Seaton Drive to Golf Links Drive is 13.5m, while the pavement width between north of Golf Links Drive to Kennedy Street is reduced to 9.5m. The speed limit on Murray Drive is 40km/h; however, the 85th percentile speed travelled along Murray Drive is 53km/h. The estimated AADT volumes is approximately 6460 vehicles per day. Based on the guidelines set out in OTM Book 18, Murray Drive should provide paved shoulders or exclusive bicycle lanes. **Figure 17** illustrates the existing Murray Drive ROW.

Figure 16: Existing Murray Drive ROW

Seaton Drive to Golf Links Drive

From Seaton Drive to Golf Links Drive, the pavement width is 13.5m and on-street parking is permitted on both sides of the street. It is recommended to maintain parking on one side of the street with a delineated parking lane of 2.5m next to the curb with a 1.0m buffer between parking lane and Bicycle lane. Dedicated 1.5m bicycle lanes are recommended on both sides of the street with a 0.5m buffer between the bicycle lane and drive lane. Drive lanes are recommended to be reduced to 3.0m to help reduce speeding along the road. **Figure 18** illustrates the recommended ROW for Murray Drive, between Seaton Drive to Golf Links Drive.

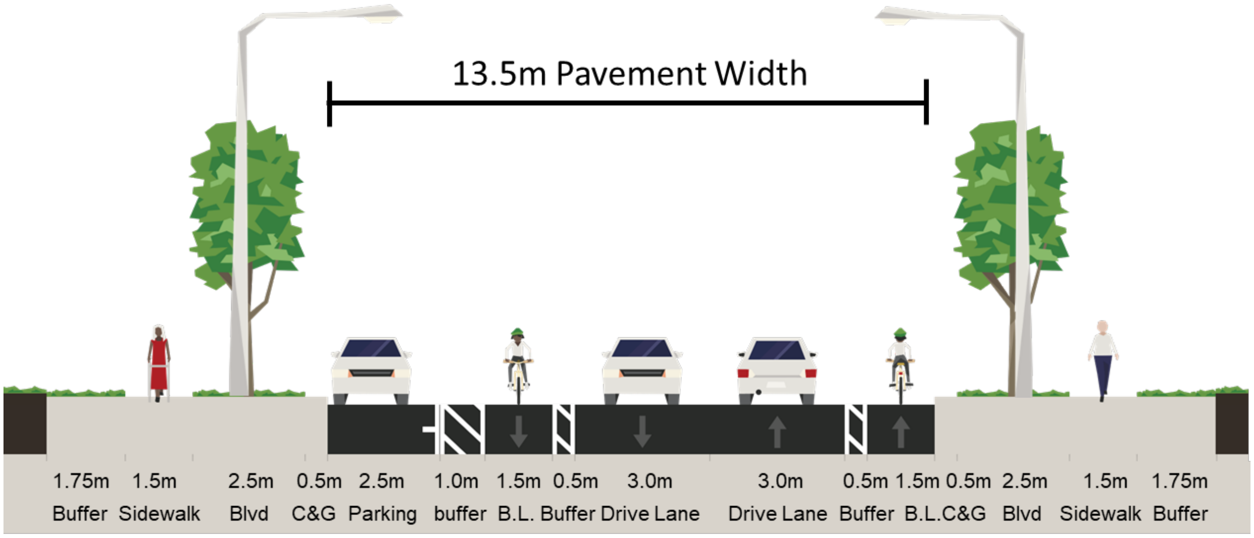


Figure 17: Murray Drive – Seaton Drive to Golf Links Drive with On-street Parking and Bicycle Lanes

Golf Links Drive to Kennedy Street

From Golf Links Drive to Kennedy Street, the pavement width is 9.5m and on-street parking is only permitted on the east side between Golf Links Drive and Trillium Drive, and on the west side between Trillium Drive to Kennedy Street. Bicycle lanes are recommended to continue on Murray Drive along this section; however, there is not sufficient space to provide a dedicated parking lane. Existing parking restrictions along this section of the road is recommended to be maintained. **Figure 19** illustrates the recommended bicycle facilities along Murray Drive between Golf Links Drive to Kennedy Street.

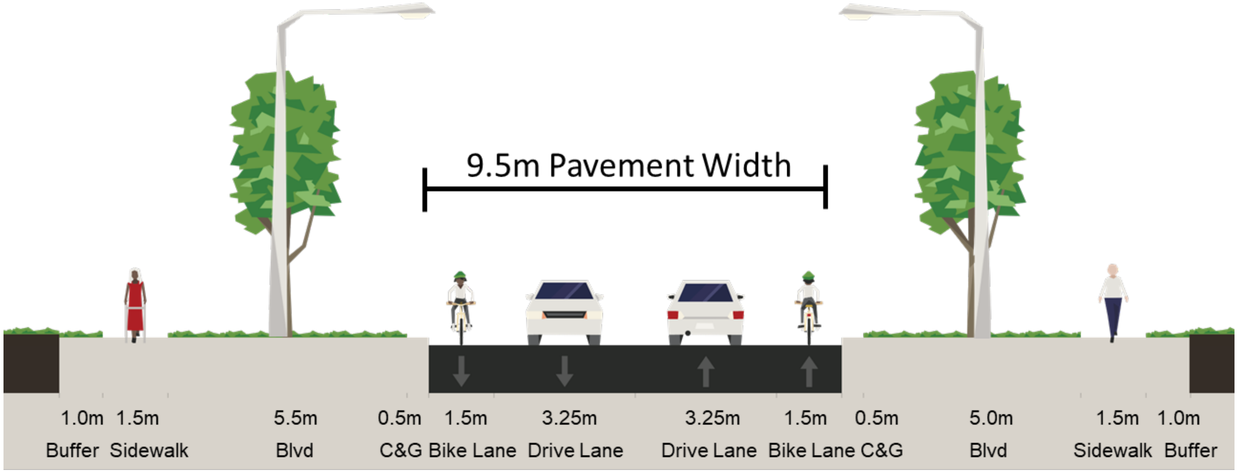


Figure 18: Murray Drive – Golf Links Drive to Kennedy Street with Bicycles Lanes

KENNEDY STREET WEST

Kennedy Street West is classified as a local urban road; however, the ROW along this road is less than the standard minimum ROW of 18m. The pavement width is also less than the standard 8.0m, at 6.0m wide. An informal paved path is provided on the north side of the street from Murray Drive to George Street, and formal sidewalks are provided from George Street to

Yonge Street on the north side of Kennedy Street. Sidewalks are provided on both sides of the street from Temperance Street to Yonge Street. **Figure 20** illustrates the existing Kennedy Street ROW from George Street to Temperance Street.

Given the limited space, sharrows are recommended for this section of the road to provide wayfinding for the Oak Ridges Trail users. **Figure 21** illustrates the recommended shared bicycle lane markings.

Figure 19: Existing Kennedy Street ROW

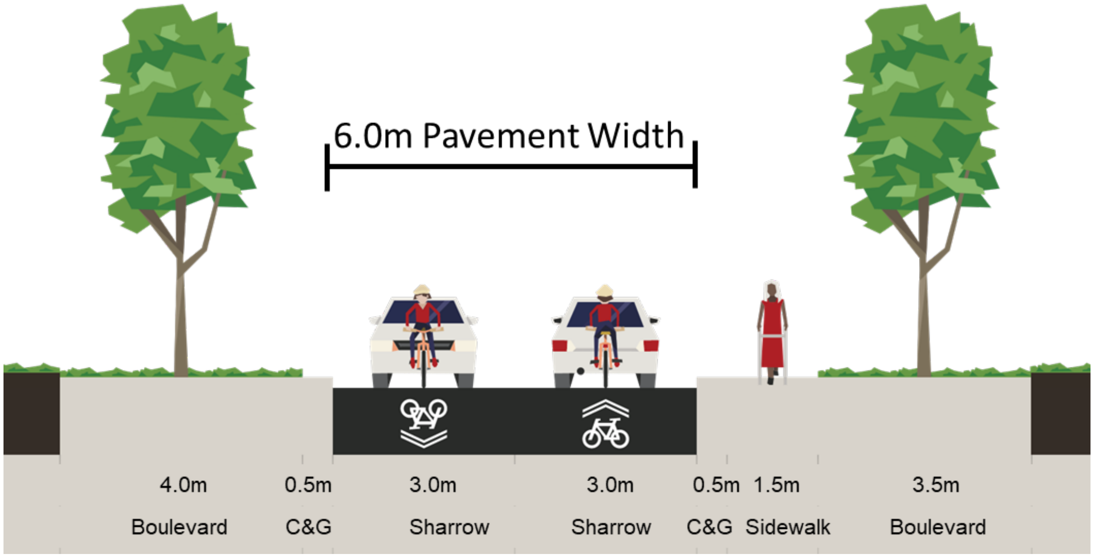


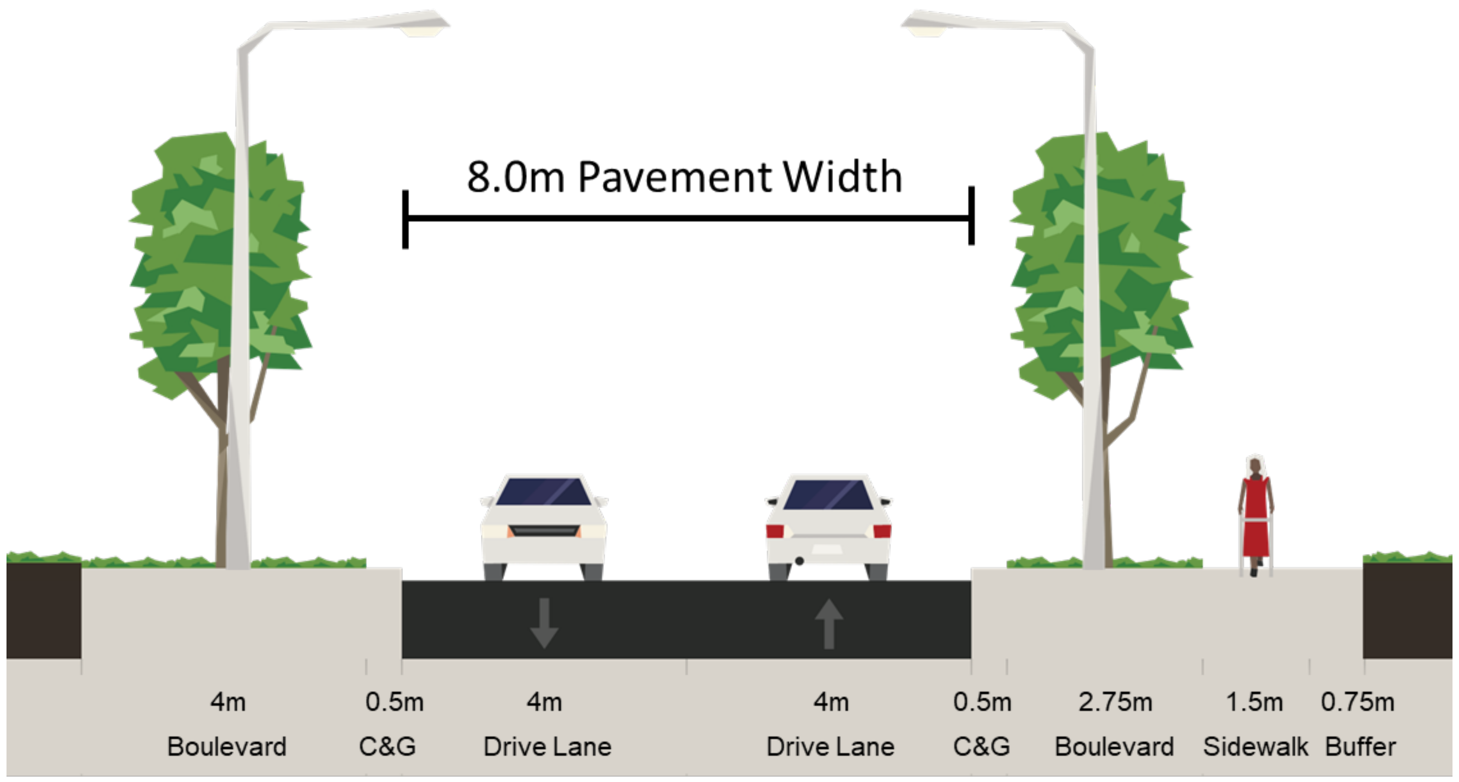
Figure 20: Kennedy Street with Sharrows

Appendix J1

Cycling Facility Options

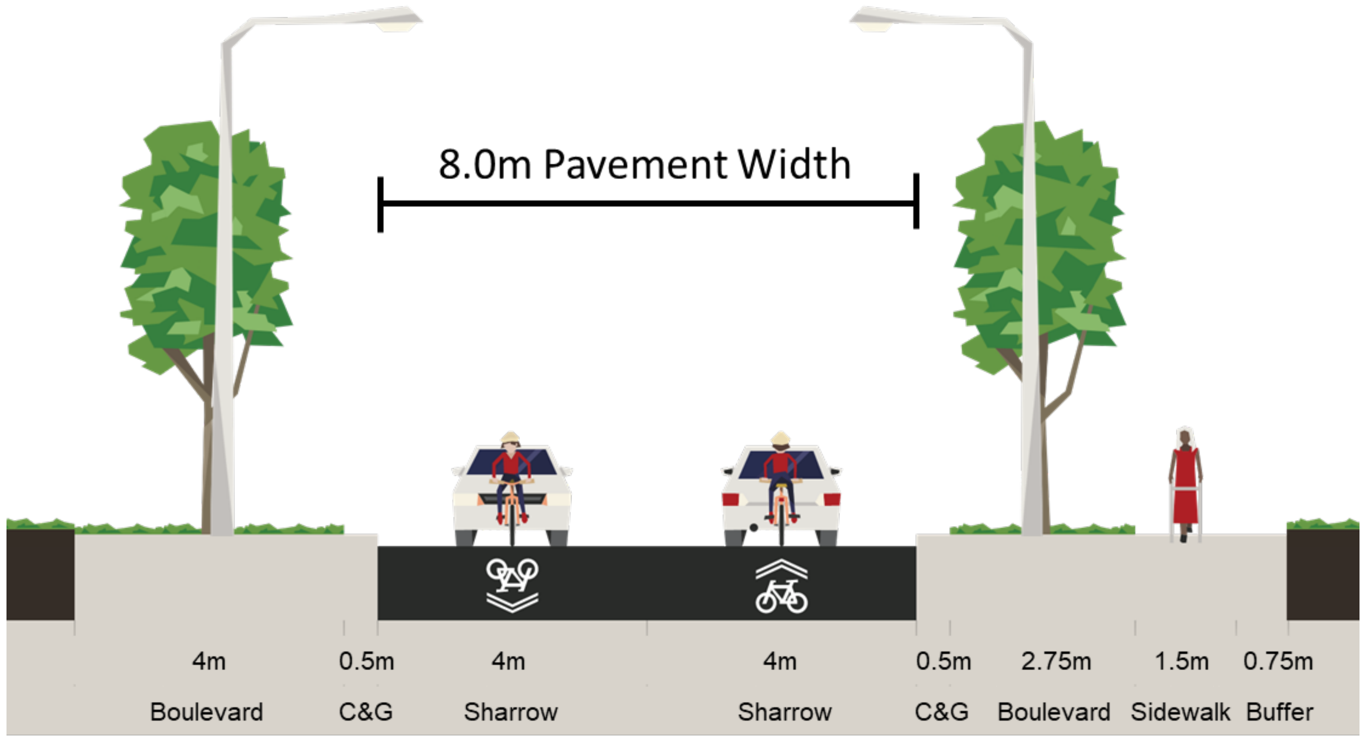
Typical Residential Right-of-Way

R-209: 18.0m Residential ROW

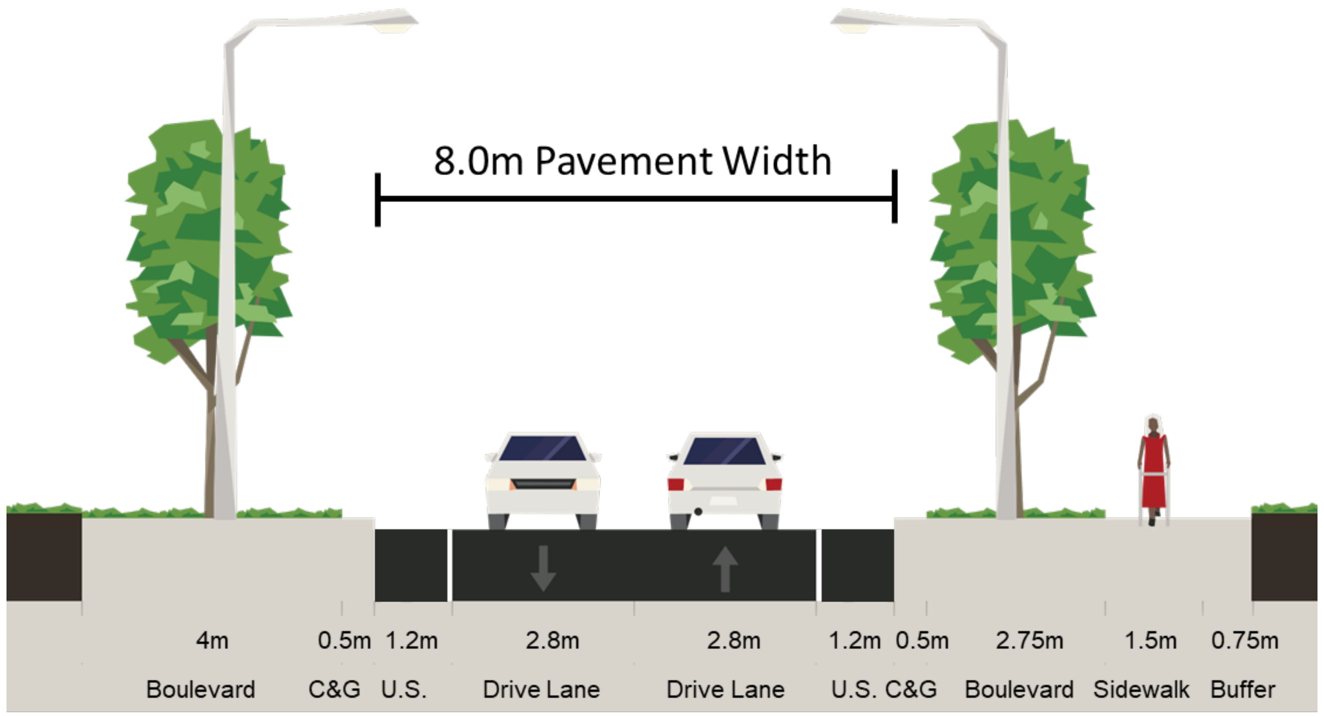


Cycling Facility Options

Option 1: Sharrows

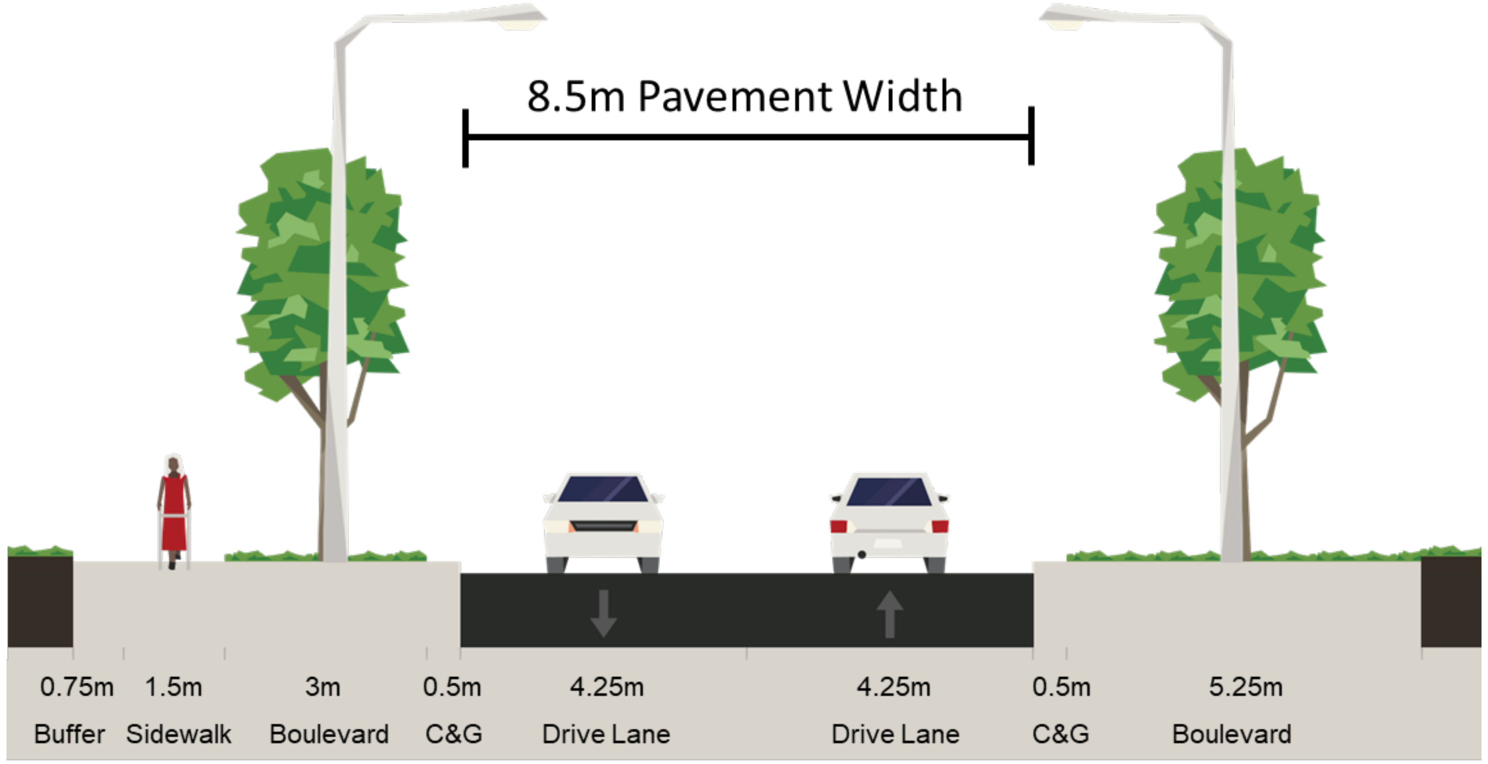


Option 2: Urban Shoulders



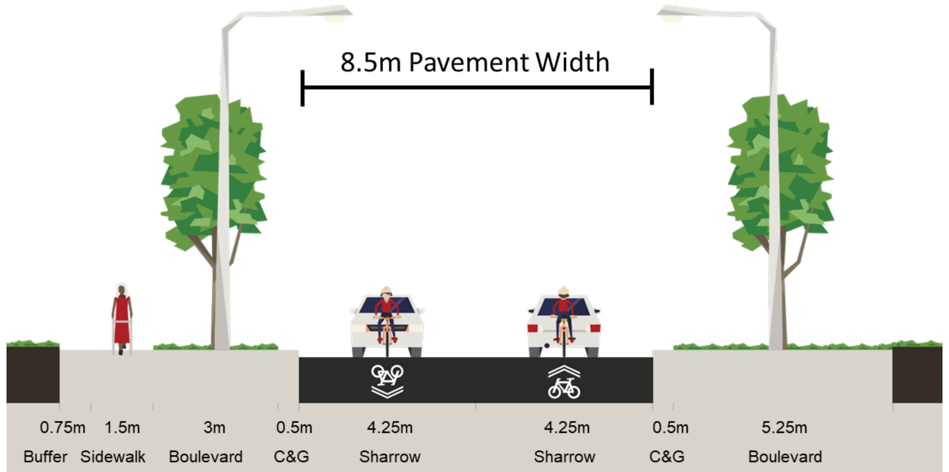
Typical Residential Right-of-Way

R-210: 20.0m Residential ROW

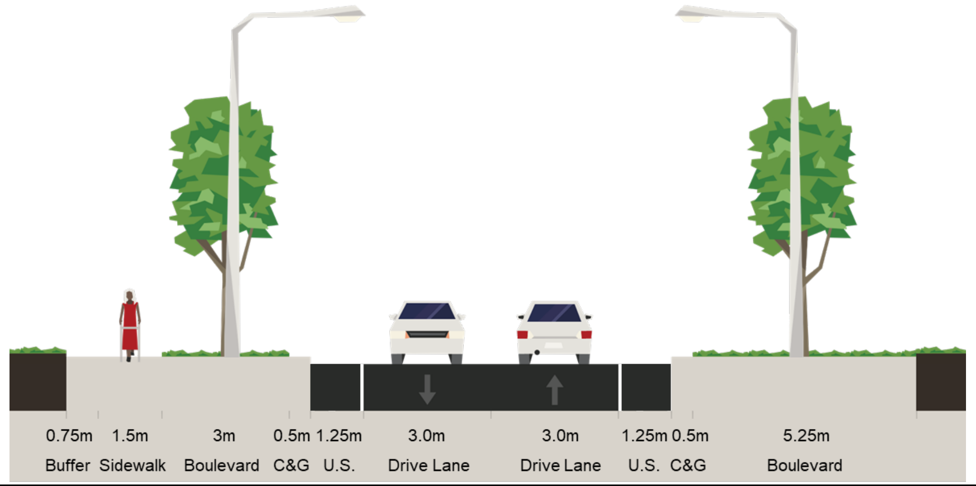


Cycling Facility Options

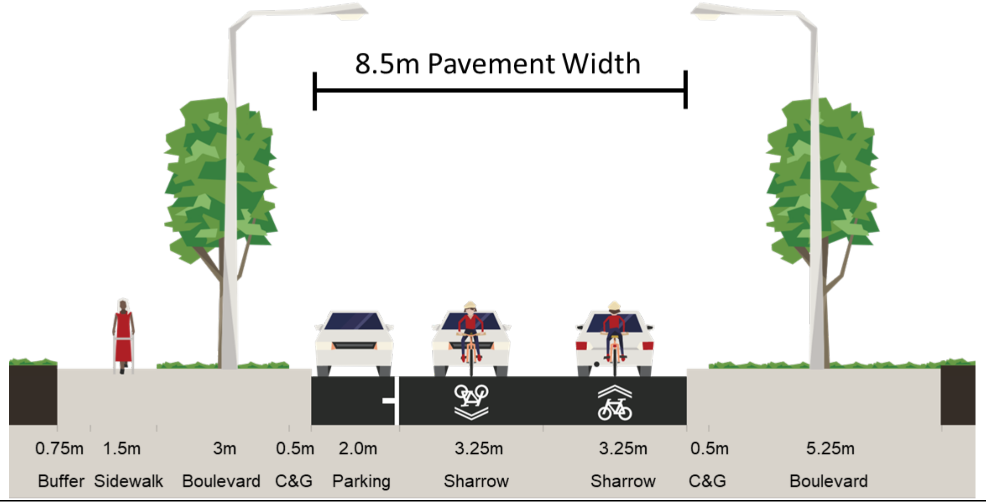
Option 1: Sharrows



Option 2: Urban Shoulders

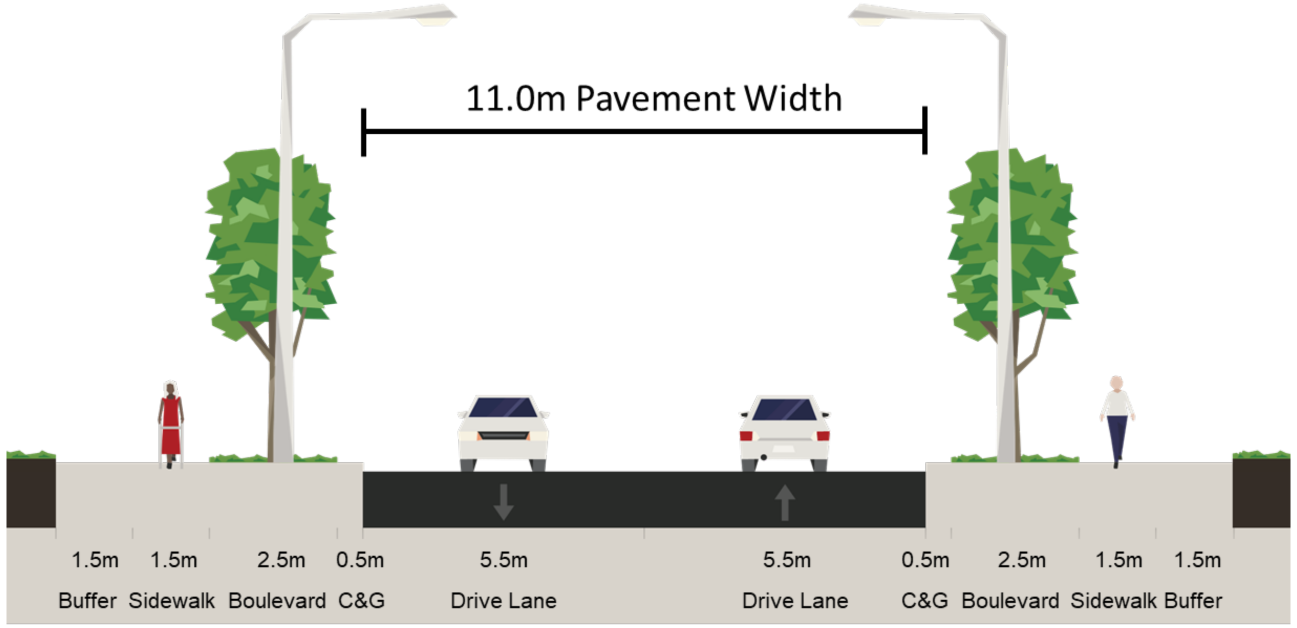


Option 3: Dedicated On-Street Parking with Sharrows



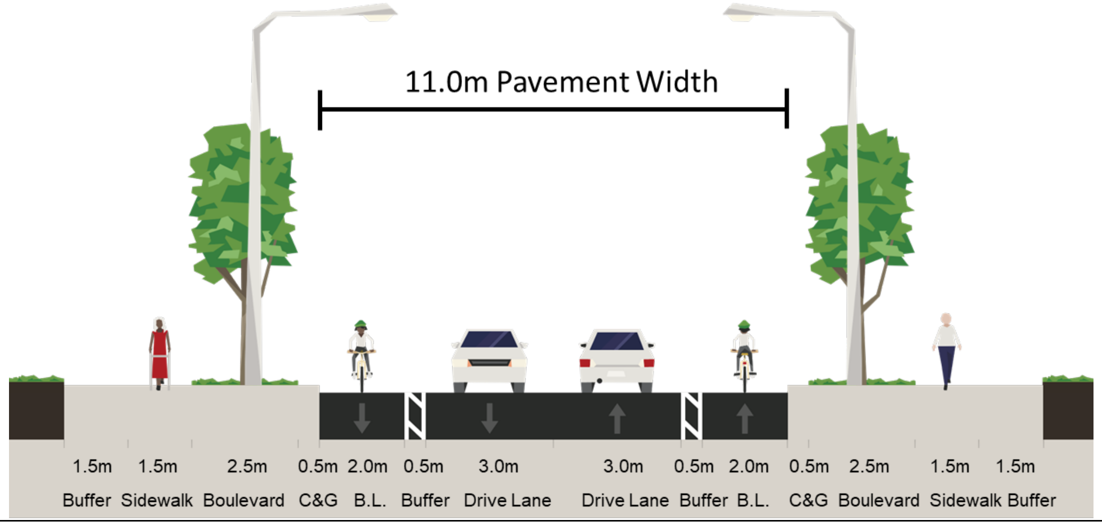
Typical Residential Right-of-Way

R-211: 23.0m Residential ROW

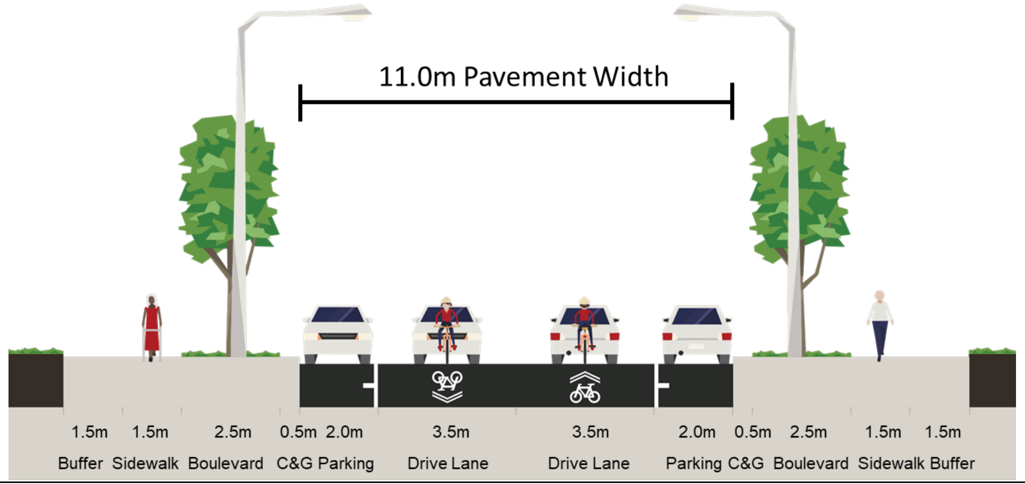


Cycling Facility Options

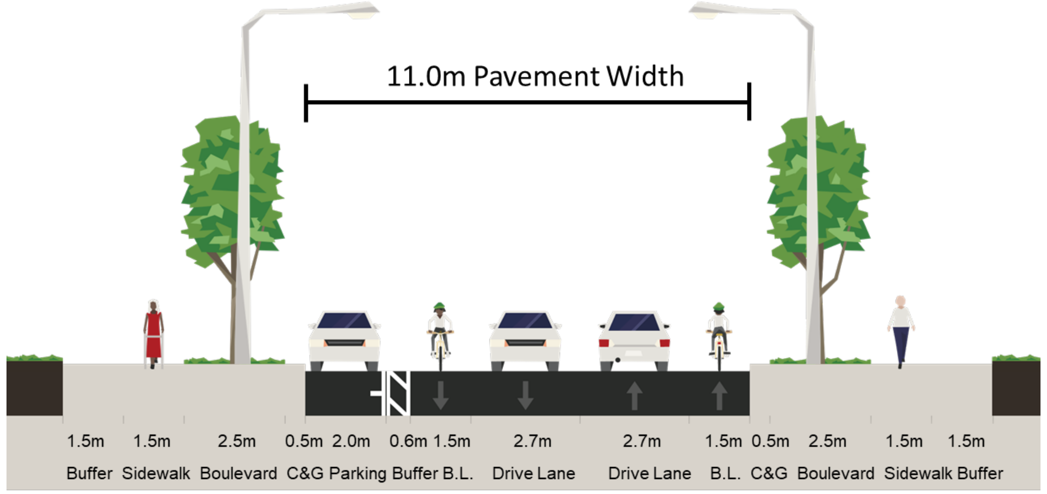
Option 1: 2.0m Bicycle Lane or raised cycle track, 0.5m buffer each side



Option 2: On-street Parking on both Sides with Sharrows

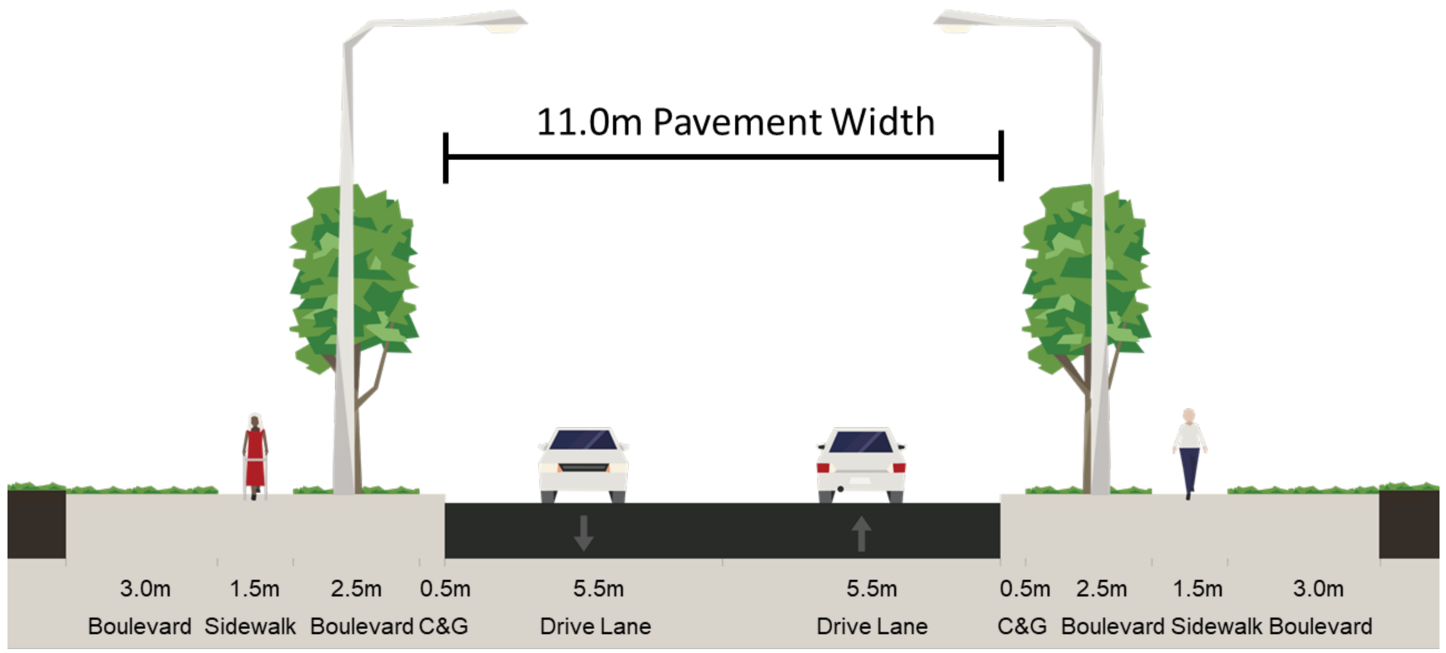


Option 3: On-Street Parking on one Side with Exclusive Bike Lanes



Typical Residential Right-of-Way

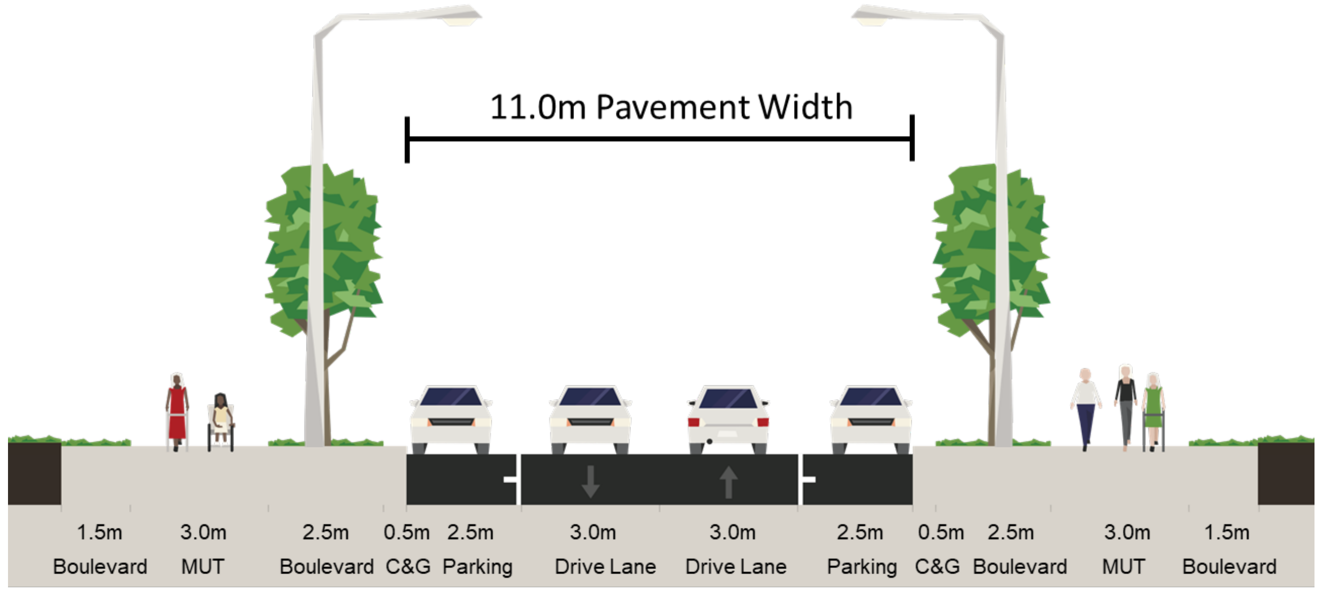
R-212: 26.0m Residential ROW



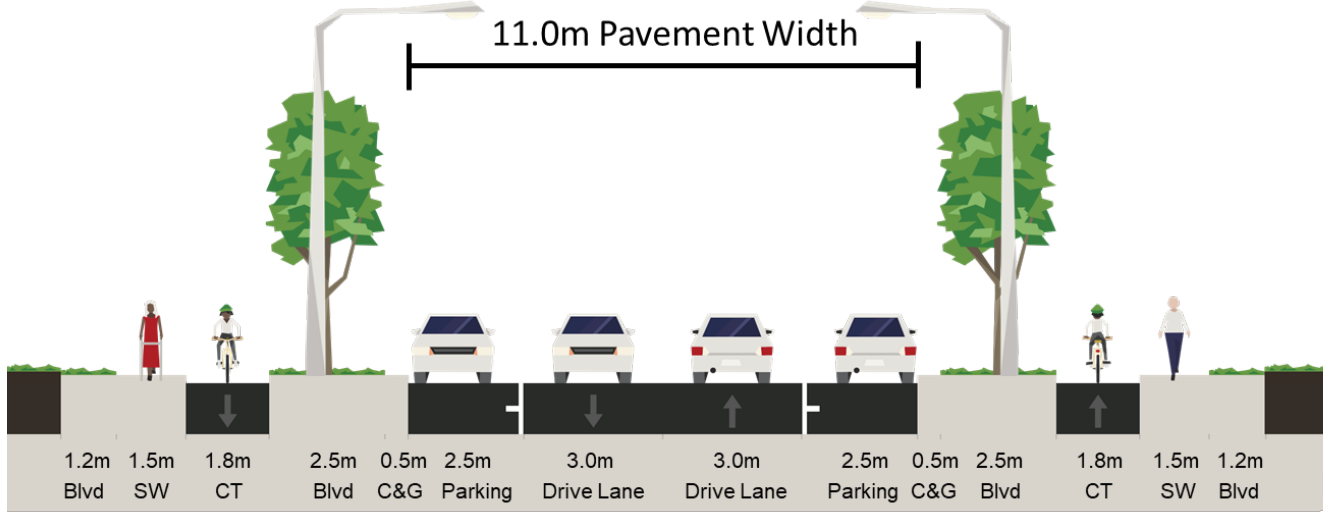
Cycling Facility Options

Options 1 – 3: See Options for R-211

Option 4: 3.0m Multi-Use Trail on Both Sides

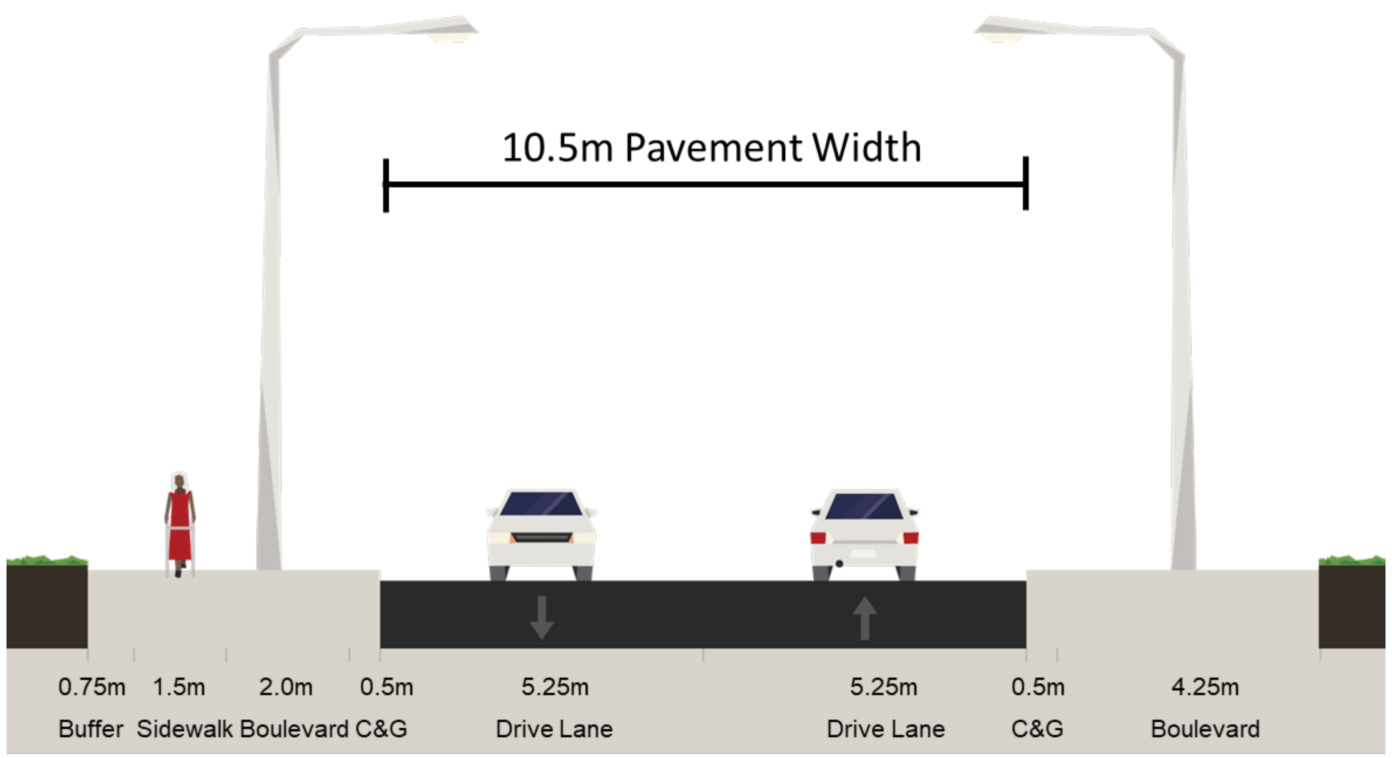


Option 5:Sidewalk and 1.5m Cycle Track on Both Sides



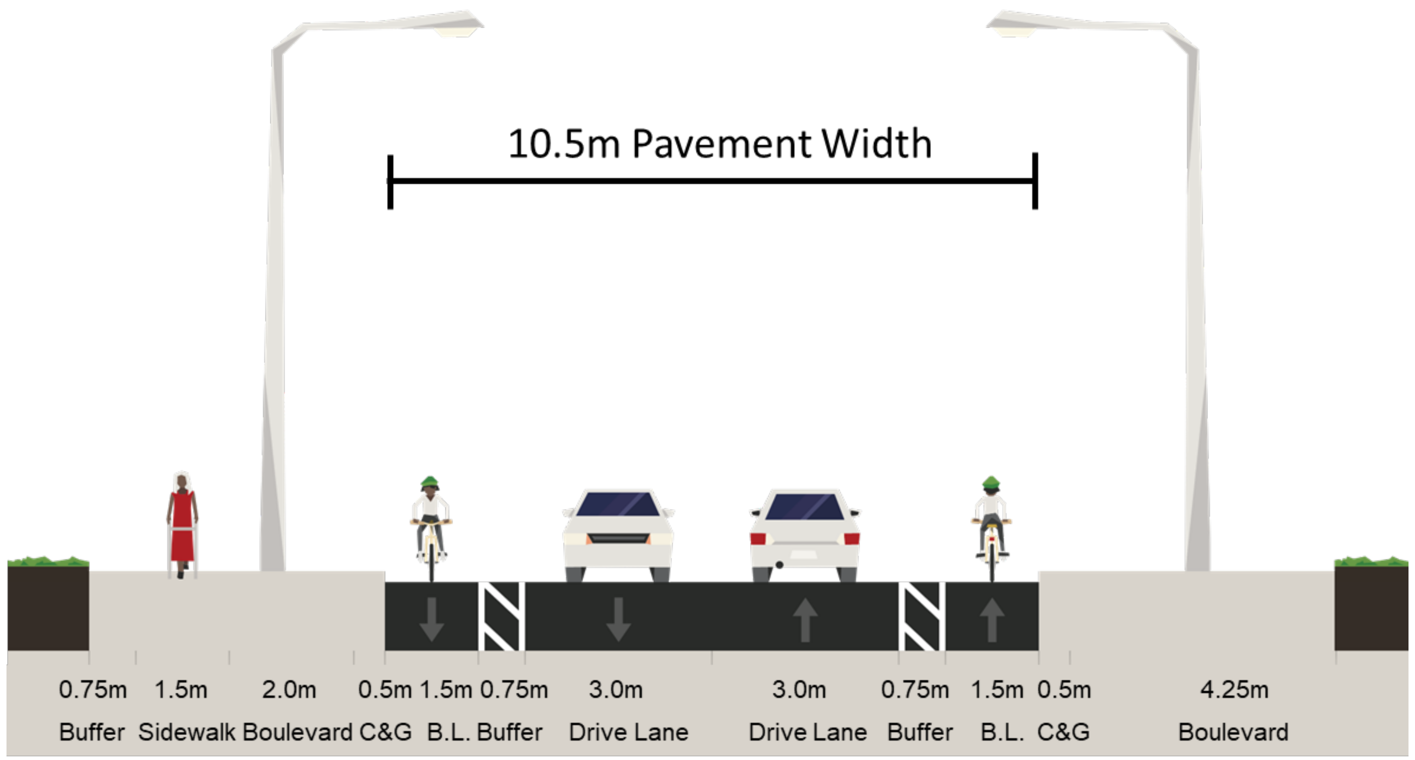
Typical Industrial Right-of-Way

R-213: 20.0m Industrial ROW

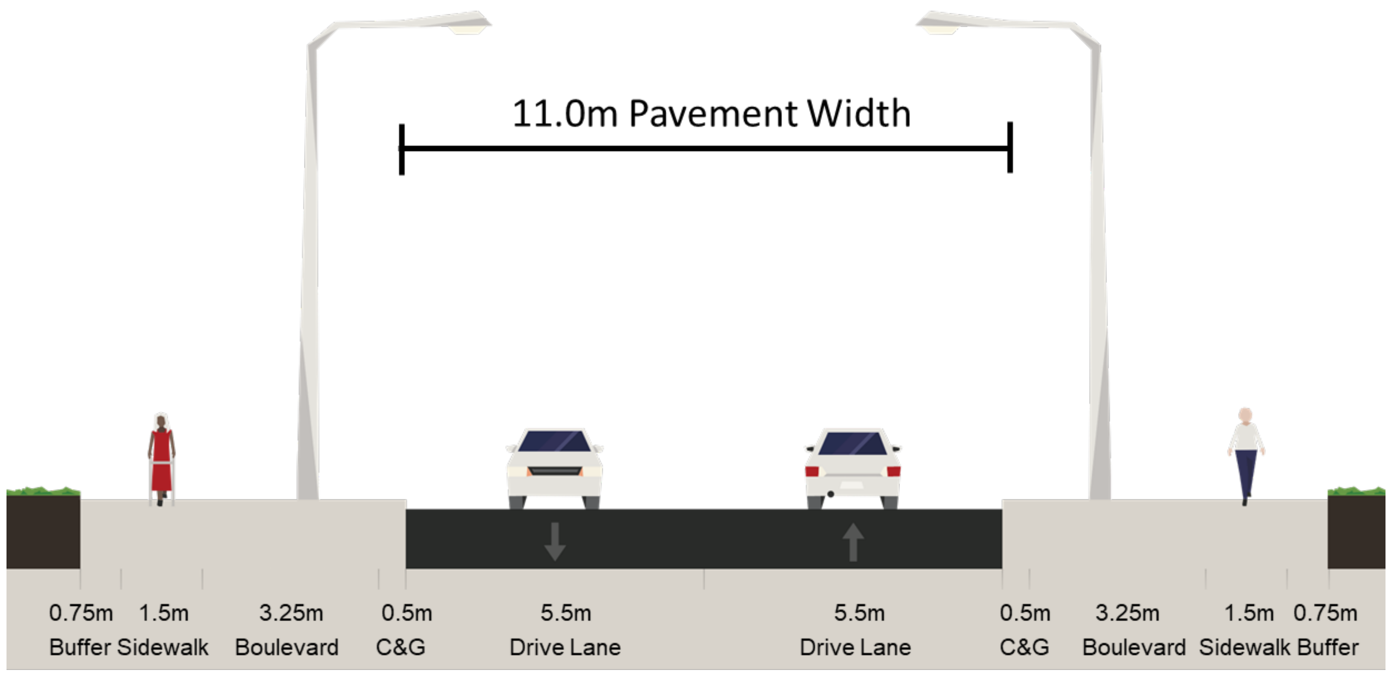


Potential Cycling Facility

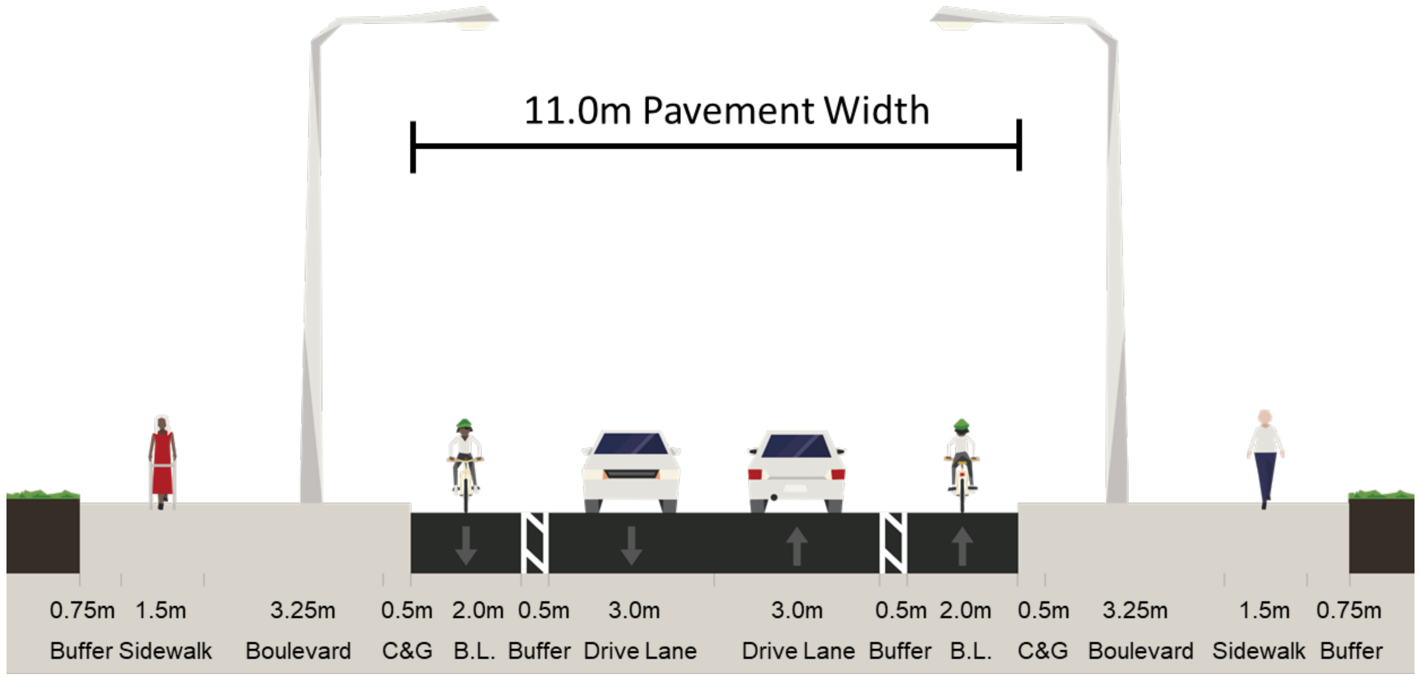
Option 1: Exclusive Bike Lanes



R-214: 23.0m Industrial ROW



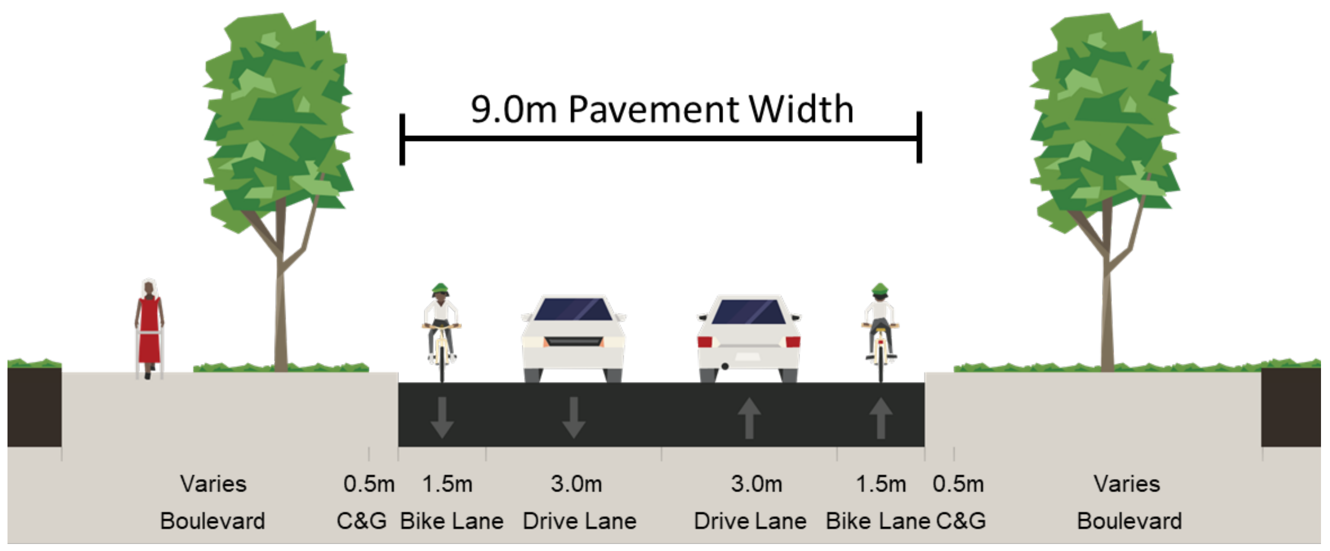
Option 1: Exclusive Bike Lanes



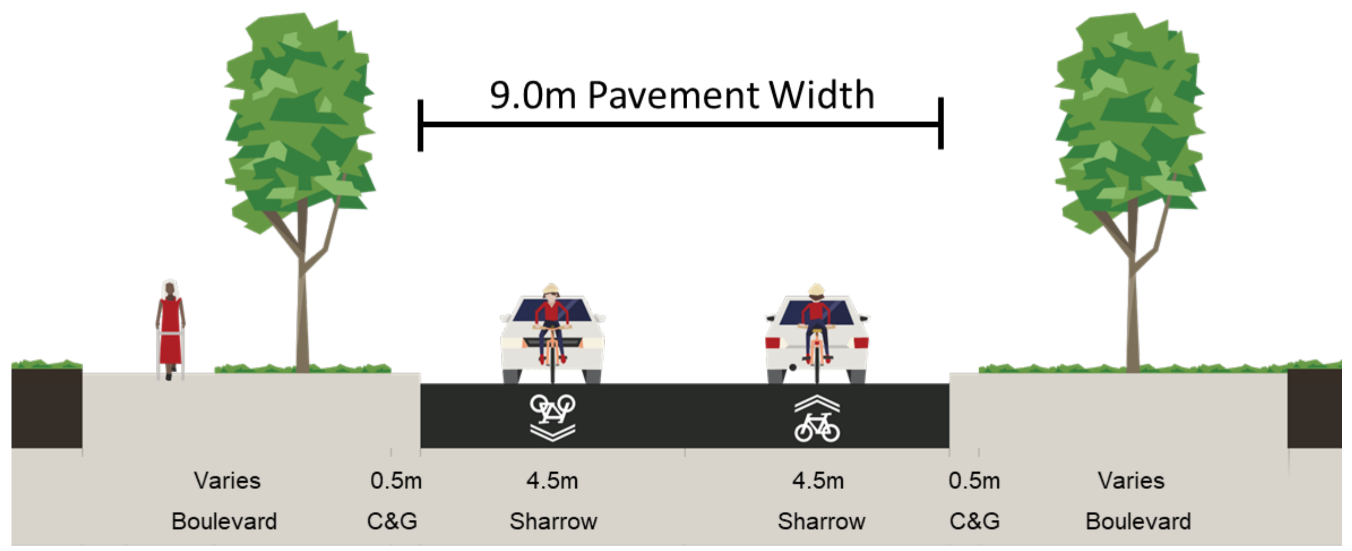
Other Non-Standard Pavement Widths

9.0m Urban Curb to Curb Pavement Width

Option 1: 1.5m Bicycle Lane on each Side

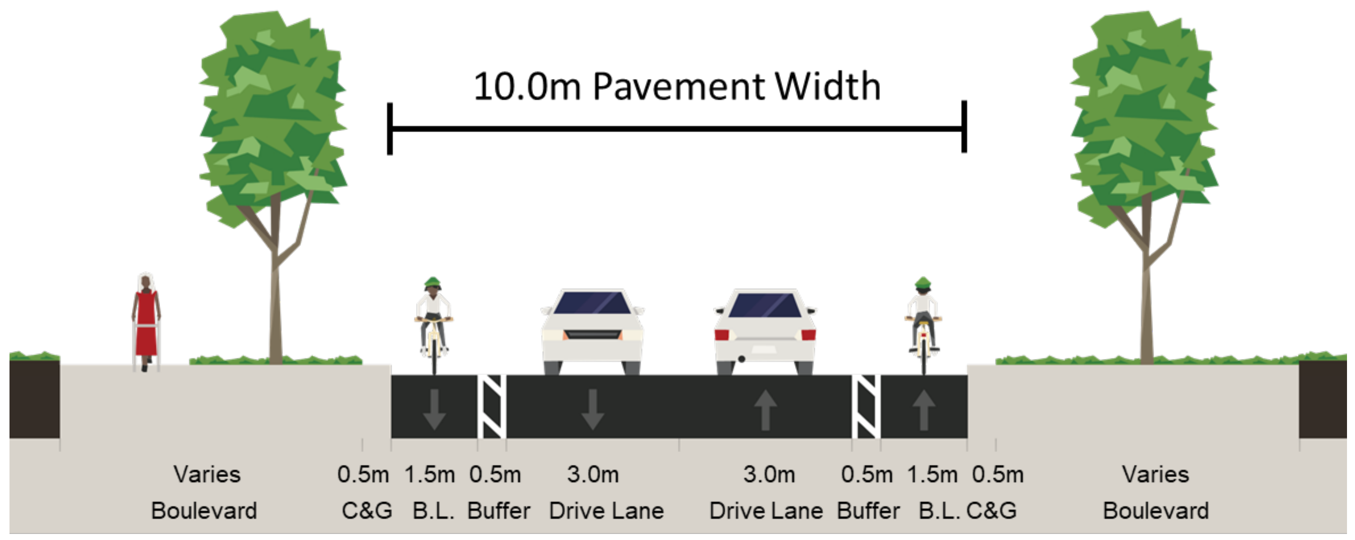


Option 2: Sharrows / Signed Route



10.0m Urban Curb to Curb Pavement Width

Option 1: 1.5m + 0.5m Buffered Bicycle Lane on each Side



Option 2: Sharrows / Signed Route