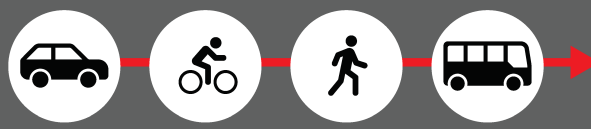


Malden Road Transportation , Public Safety and Urban Design Improvements Project

Class Environmental Assessment
Revised Traffic Report



Stantec

October 2021

Malden Road Transportation, Public Safety and Urban Design Improvements Project

Traffic Report

October 15, 2021

Prepared for:

Town of LaSalle

Prepared by:

Stantec Consulting Ltd.

165001141

Revision	Description	Author		Quality Check		Independent Review	
0A	Draft	B. Channa Reddy	09/09/2019	B. Orr	09/09/2019		
0B	Draft	B. Channa Reddy	10/10/2019	B. Orr	10/11/2019		
0C	Final-Draft	B. Channa Reddy	12/13/2019	B. Orr	12/16/2019	K. Welker	12/20/2019
1A	Draft	M. Colley/ B. Channa Reddy	08/12/2020	B. Orr	08/14/2020		
1	Final	M. Colley	07/13/2021	A. Mirhoseini	07/13/2021	K. Welker	07/20/2021
1B	Revised Final	M. Colley	10/15/2021	A. Mirhoseini	10/15/2021	K. Welker	10/15/2021



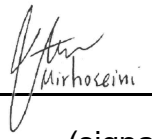
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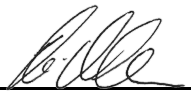
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1.0 Introduction

1.1 Background

The Town of LaSalle, in partnership with the County of Essex, has initiated a Class Environmental Assessment (Class EA) Addendum and Preliminary Design for Malden Road between the Town of LaSalle limits to the north and the urban boundary to the south, to address the existing and future 'multimodal' transportation conditions. The Study is being conducted as an addendum to a "Schedule C' project under the Municipal Class Environments Assessment (as amended in 2015), which is approved under the Ontario Environmental Assessment Act. This report represents the traffic analysis portion of a broader Environmental Study Report (ESR) for Malden Road.

1.2 Study Purpose

This EA Study is being undertaken to assess and address the existing traffic congestion, review the population and employment growth within the region and the associated transportation impacts. Based on these impacts the objective is to identify potential transportation network improvements that will best serve a variety of users including motorists, transit users, pedestrians, and cyclists.

As part of the EA study, this traffic study was conducted for the existing (2019) traffic conditions and the future 2041 planning horizon year conditions. The intersection capacity analysis was completed using Synchro traffic modelling software to quantify roadway operations, safety performance analysis was conducted to identify safety-related concerns within the study area, and roadway mitigation measures and active transportation solutions were evaluated.

This report documents the following analysis:

- A review of existing multi-modal transportation network facilities within the study area, presented in Section 2;
- A summary of existing (2019) traffic volumes for weekday AM and PM peak hours, presented in Section 3.1;
- An analysis of intersection capacity operations for the existing (2019) weekday peak hour conditions, presented in Section 3.2 and Section 3.3;
- A review of collision history for intersections and mid-block links; identifying associated lighting conditions, impact and collision types, environmental conditions, and road surface conditions, presented in Section 4.1 and 4.2;
- A safety analysis using the AASHTO Highway Safety Manual (HSM) Predictive Method, to estimate an expected average collision frequency for the study area intersections, presented in **Section 4.3**;
- A geometric review of study intersections presented in Section 4.4;

- An assessment of future roadway traffic conditions, estimated future traffic growth rates, and preferred roadway alternative recommendations using outputs from the Town of LaSalle's ongoing Transportation Master Plan, presented in Section 5;
- An assessment of Active Transportation opportunities and constraints, as well as potential solutions (to be determined through design), presented in Section 6; and
- A summary of study findings and recommendations are documented in Section 7.

1.3 Background documents review

1.3.1 Ontario Traffic Manuals

The purpose of the Ontario Traffic Manual (OTM) is to provide information and guidance for transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. Since the 2009 Malden Road Class EA, significant changes have been made to the regulations within the *Highway Traffic Act of Ontario* (HTA), specifically surrounding pedestrian crossings and cycling facilities. To properly acknowledge and implement these changes, the below sections provide a review of what the Addendum to the Malden Road Class EA needs to consider for pedestrian crossings and active transportation infrastructure within the Study Area.

1.3.1.1 Ontario Traffic Manual Book 15 – Pedestrian Crossing Treatments

The OTM Book 15 (June 2016) provides practical guidance and application information on pedestrian roadway crossing treatments and is a response to concerns over the cost of maintaining standard pedestrian crossover (PXO) or traffic control signals. The book includes new PXO layouts for low-speed, low-volume roads, creating options for municipalities, such as the Town of LaSalle, that are looking into non-signalized pedestrian crossings, which could be considered for various points along Malden Road. New PXO crosswalk beacons include the use of solar power, as these crosswalks are:

- Free from trenching, cabling, and in-ground wiring;
- Easy to mount or retrofit onto a range of square and round poles; and
- Improve driver compliance to produce the highest yield rate per dollar spent on the system.

PXOs are to be marked crosswalks identified by signs and pavement markings. Pedestrians, vehicles, and cyclists must all understand the rules of the road at these crosswalks to ensure safety for everyone. Pedestrians must exercise due care and cross only when traffic has come to a complete stop. If the PXO has a flashing beacon, the corresponding button should be pressed to activate it. The beacon will help increase driver awareness. Vehicles must watch for pedestrians, be prepared to stop, and only start moving again once the pedestrian has cleared the roadway. Cyclists must follow the same rules as vehicles. Cyclists wishing to cross at the PXO should dismount and walk the bike across.

1.3.1.2 Ontario Traffic Manual Book 18 – Cycling Facilities

A direct comparison of the relative safety of different types of bicycle facilities and degrees of separation is difficult. A bicycle facility with greater separation may appear to be 'safer' but may result in more conflicts at intersections and driveways, especially if the separation makes the cyclist less visible to the motorist. The overarching cycling facility selection process outlined in the OTM Book 18: Cycling Facilities (2013) follows a 3-step process:

- Step 1: Facility Pre-Selection: Pre-select an appropriate type based on vehicular volume and speed using the OTM Book 18 Nomograph;
- Step 2: Consider corridor specific characteristics: Consider design characteristics such as visibility of cyclists, number of driveway accesses and whether on-street parking is provided; and
- Step 3: Justify Decision and Identify Design Enhancements: Document the rationale by way of this EA.

The methodology outlined in OTM Book 18 was employed to determine the suitable facility for the study area corridor.

1.3.2 Provincial Policy Statement

The Provincial Policy Statement 2020 (PPS) is the guiding document that provides overall policy directions on matters of provincial interest relating to land use planning and development in Ontario. The original PPS came into effect in 2005 and was the planning policy that the original Malden Road Municipal Class EA (2009) was completed under. Since then, the 2020 PPS has replaced the 2005 and 2014 PPS, however, no major changes were made to the transportation infrastructure policies.

The Malden Road Municipal Class EA Addendum supports matters of provincial interest as it aims to create an efficient intermodal transportation system, inclusive of active transportation, that safely facilitates the movement of people and goods, while also being energy efficient, transit-supportive, and future-oriented to address projected needs of both the Town and the County. As part of the Malden Road EA, efficient use will be made of existing servicing and transportation infrastructure, and consideration will be made to already planned infrastructure in order to minimize unnecessary public expenditures. Through the use of this EA and other town- and county-led transportation demand management strategies, efficient land development patterns will be developed within LaSalle and the surrounding area.

1.3.3 County of Essex Official Plan

The County of Essex Official Plan was prepared in 2014 and outlines how land should be used and the ways in which the County should grow, in order to meet future community needs until 2031. A main goal of the Official Plan is to invest in a region-wide transportation system that connects all urban areas within the County by providing a highly interconnected road network and accessible transportation system that is designed and built for pedestrians, cyclists, transit and automobiles.

As Malden Road is recognized as both a County Road and an important commercial corridor for the Town of LaSalle, it is important to promote the continual development and improvement of Malden Road as it adds to the existing accessible and active transportation system within the County.

The County's Active Transportation System will continue to evolve over time through the addition of missing links and the incorporation of additional linkages such as Malden Road/County Road 3. The expansion of Malden Road was recommended as part of the 2004 Draft Essex-Windsor TMP but was not included as a transportation policy within the Official Plan until the 2014 adoption. The Malden Road Municipal Class EA Addendum process will need to consider these transportation policies in order to properly address any missing linkages and ensure the County's vision for County Road 3 is met.

1.3.4 County Wide Active Transporting System (CWATS) Master Plan

The County of Essex developed a comprehensive Active Transportation Master Plan to guide the County and local area municipalities in implementing a County-wide network of cycling and pedestrian facilities over a period of 20 years. The Active Transportation Master Plan is an important and essential tool to assist the local municipalities and other partners to encourage walking and cycling for recreation and utilitarian trips and reduce the reliance on single occupant motor vehicle trips. Adopted in 2012, CWATS is continually expanding its network of paths and trails every year.

As CWATS was adopted after the 2009 Malden Road EA was completed, there are a variety of recommendations, such as active transportation connections between Malden Road and Normandy Street, Todd Lane, and Reaume Road, that were not able to be included or assessed as part of the 2009 design recommendations. This recommendation, as well as the many other related recommendations within the CWATS that now apply to Malden Road, will need to be considered through this addendum and will need to be included in the final preferred design recommendations. Within CWATS, Malden Road is identified as an important corridor for multimodal connections to adjacent municipalities. The 2012 CWATS Master Plan identified Malden Road as a candidate route for alternative active transportation route analysis. One of the important objectives of the study was to identify a continuous and connected county wide active transportation network that builds upon, connects, and supports existing and

planned local municipal routes and facilities. The study proposed a multi-use trail between Normandy Street and Todd Lane and a context sensitive solution south of Reaume Road to the southern study area limits. A context sensitive solution is proposed as this section of the roadway is considered to be a highly desirable active transportation route but requires a design solution that meets the needs of the County and the Town of LaSalle, considering site specific criteria, design challenges and opportunities.

1.3.5 Town of LaSalle, Official Plan

An Official Plan is a policy document that guides the short-term and long-term development in a community. It applies to all lands within the municipal boundary and the policies within it provide direction for the size and location of land uses, provision of municipal services and facilities, and preparation of regulatory bylaws to control the development and use of land.

The Town of Lasalle's Official Plan provides direction for the Town over a period of 20 years, to 2038, on matters related to land use planning and growth, and to promote the Provincial policy planning system.

Schedule A and Schedule B of the Official Plan identify the Malden Road corridor as a Mixed-Use Corridor. The Mixed-Use Corridor Designation functions as the connective spine of the Town as well as links for the surrounding neighborhoods. Areas that are designated Mixed-Use Corridor Designation will typically include an array of compatible land uses including retail and service commercial uses, mid-rise and high-rise residential uses, as well as institutional and community uses. These Mixed-Use Corridors are expected to provide people-oriented employment and to accommodate higher density/intensity development, while maintaining a broad mix of land uses that support investment in transit and the achievement of complete communities.

The Town's transportation system is depicted on Schedule D of the official Plan. The intent of the Official Plan is to develop a multimodal transportation system that is safe, efficient, economical, convenient, and comfortable for all users, while respecting the heritage assets, natural features, and character of the Town. The objectives of the plan related to transportation include:

- Developing and maintaining multimodal transportation routes throughout the Town with linkages to external transportation systems;
- Ensuring the transportation system is interconnected, efficient, safe, and supportive of all modes of travel;
- Enhancing active transportation facilities with streetscape elements such as benches, waste receptacles, bicycle racks, crosswalks, pedestrian-scaled lighting, and shade; and,
- Integrating the multi-modal transportation system with existing and planned land use patterns.

Schedule D of the Official Plan identifies a planned collector road parallel to Malden Road from Bouffard Road to Suzanne street. The Extension of Reaume Road from Malden Road to Huron Church Line is also identified in the plan.

1.3.6 Town of LaSalle Transportation Master Plan, January 2020

The LaSalle Transportation Master Plan (TMP) and Age-Friendly Active Transportation Master Plan (ATMP) are guiding documents for enhancing and facilitating a comprehensive multimodal transportation network in the Town of LaSalle. The plan encompasses all modes of transportation and was adopted by LaSalle Council in January 2020.

The overall vision for the TMP/ATMP is to create an accessible, well-connected, and age-friendly transportation network that supports sustainable and multimodal travel for pedestrians, cyclists, transit users and motorists of all ages and abilities. In addition to the envisioned future of LaSalle, the TMP/ATMP also illustrates some challenges and opportunities facing Malden Road. The TMP/ATMP elevates the need for a review of traffic and intersection operations as well as the need for a greater separation for cycling facilities, such as the need for an upgraded in-boulevard pathway along Malden Road within the study area.

The TMP/ATMP also recommends improvements at the following intersections along Malden Road:

- Sprucewood Avenue/Malden Road
- Normandy Street/Malden Road
- Morton Drive/Tuttle Ave/Malden Road
- Reaume Drive/Malden Road
- Bouffard Road/Malden Road
- Laurier Drive/Malden Road

The TMP/ATMP is a guiding document with recommendations that will need to be considered when determining a solution for Malden Road, as part of the Malden Road Municipal Class EA Addendum process.

1.3.7 Essex Windsor Regional Transportation Master plan, October 2005

Essex County updated their Windsor Area Long Range Transportation Study in 2002 with an Essex-Windsor Regional Transportation Master Plan (EWRTMP) in 2005. The study goal was to develop a new comprehensive Regional Transportation Master Plan for the Essex Windsor region with recommended policies and an implementation strategy that will serve the needs of the region to year 2021.

This Regional Transportation Master Plan encompassed the County of Essex, its seven local municipalities and the City of Windsor. Major findings of this regional transportation study included a mention of deteriorating conditions on parts of County Road 3, during the existing conditions analysis. The report also added that in its existing two-lane configuration, a section of Malden Road from Todd Lane to Normandy Street will have significant capacity deficiencies to accommodate future travel demands.

The regional transportation study included an extensive assessment of options to address the region's transportation system needs to 2021. A series of strategic roadway capacity enhancements, mainly in the form of important road widenings, were recommended in the region to solve localized route capacity deficiencies owing to forecasted population and employment growth and distribution. The widening of Malden Road to four through lanes from Todd Lane to the limits of sanitary sewer area was under planning process during the evaluation of study. The study reinforced the widening as a part of its preferred alternative solution.

1.3.8 Comprehensive Zoning Review/Draft Mixed-Use Zoning

The Town is currently preparing a new Comprehensive Zoning By-law to implement the land use policies and designations that are part of the Town's new Official Plan. There will be five zone categories along the Malden Road Corridor: (i) The LaSalle Town Centre Zone, from Todd Lane to the Cahill Drain; (ii) the Mixed-Use Corridor Zone, from the Cahill Drain to Laurier Parkway; (iii) the Institutional Zone (for Sandwich Secondary School); (iv) the Recreational Zone (for the Vollmer Complex); and (v) the Residential One Zone, for remaining lands affected by this EA Addendum located south of Laurier Parkway.

The "LaSalle Town Centre Zone" and the "Mixed Use Corridor Zone" permit a wide range of retail, service commercial, professional, and medical offices, and mid-rise apartment style residential buildings and land uses. The redevelopment/development of Malden Road, from Todd Lane to the Cahill Drain as the LaSalle Town Centre, and from the Cahill Drain to Laurier Parkway as the connective spine Mixed Use Corridor, is a key strategic goal for this community. The new zone regulations being developed for these two zones will incorporate urban design, building and parking standards that will facilitate the continued urbanization/transformation of what will become vibrant, pedestrian and transit-oriented places that will be safe, attractive, and inviting for residents and visitors of all ages. They will provide people-oriented employment and accommodate higher density/intensity development while maintaining a broad mix of land uses that support investment in transit, active transportation and the achievement of complete streets and communities.

The Recreational, Institutional and Residential One Zone categories will continue to be applied to the existing municipal recreational complex, secondary school and low-density residential homes located south of Laurier Parkway.

2.0 Study Area

The Malden Road Class EA study area extends between the Town of LaSalle's northern limits to the urban boundary in the south, south of Meagan Drive. The study area includes a unique combination of uses including commercial, residential, recreational, institutional, and agricultural uses. A detailed demographic and land use review of the study area is provided separate of this traffic study report within the Environmental Study Report (ESR) and a summary of land use and population growth is provided below. The study area for the traffic analysis is shown in **Figure 1.**



Figure 1: Study Area and Existing Roadway Network

2.1 Land Uses

Malden Road is designated as a Mixed-Use Corridor in the Town of LaSalle Official Plan (2018), as shown in **Figure 2**. This designation envisions a vibrant pedestrian and transit-oriented corridor with a mix of land uses and densities that support investment in transit and complete communities. Land uses along this type of corridor include retail and commercial, mid- and high-rise residential, institutional and community uses. In addition to the Official Plan land use designation shown below, a new Comprehensive Zoning By-law further divides Malden Rd into five zone categories.

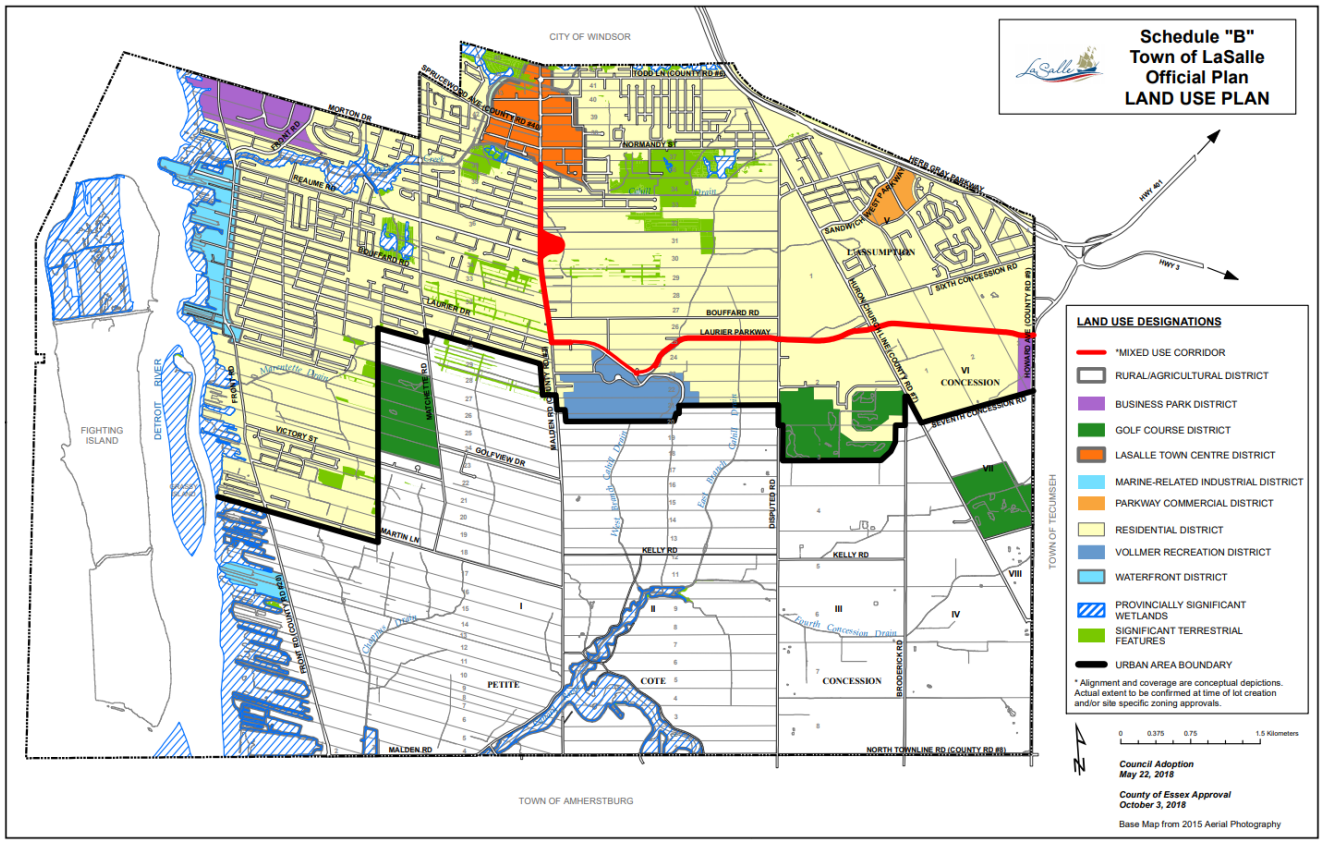


Figure 2: Land Use Plan (Schedule B), Town of LaSalle Official Plan

2.2 Historical Population Growth

Population statistics are used to understand historical trends in growth and help produce growth projections. Essex County, Town of LaSalle, and City of Windsor Census population statistics from 2006 to 2016 are presented in **Table 1** to illustrate historical population growth. The jurisdictions presented in **Table 1** are based on Official Plan boundaries; Essex County's population statistics include the following Census subdivisions: Amherstburg, Essex, Kingsville, Lakeshore, LaSalle, Leamington, and Tecumseh.

Table 1: 2006-2016 Census Population of LaSalle, Windsor and Essex

	2006	2011	2016	2006-2016 Change
Essex County	176,920	177,720	181,525	4,605
Town of LaSalle	27,650	28,645	30,180	2,530
City of Windsor	216,470	210,890	217,185	715

During the period from 2006 to 2016, there has been marginal growth in the City of Windsor, Town of LaSalle, and Essex County. Most notably, the greatest change has been observed in the Town of LaSalle, with 9% growth from 2006 to 2016 (approximately 1% annual growth rate) compared to 2.6% in Essex County and 0.3% in the City of Windsor. Looking back throughout history, the greatest growth in the region occurred in the 1990s, with slowed growth in recent years.

2.3 Planned Population and Employment Growth

2.3.1 Essex County

The Essex County Official Plan (2014) estimates that population and employment growth will continue to progress slowly in the short-term and that most growth will occur in the mid to long-term, towards the planning period ending in 2031. From 2011 to 2031, the total Essex County area is expected to see a population increase of approximately 20%, in which LaSalle, Tecumseh and Lakeshore will experience the greatest growth. Historical growth in Essex County from 1996 to 2016 is shown below in **Figure 3**, along with Essex County Official Plan population projections to 2031. Of note, the growth projections presented in the Essex County Official Plan differ from the growth estimates presented in other planning documents such as the Town of LaSalle Official Plan and City of Windsor Official Plan, revealing that there is uncertainty related to growth in the study area.

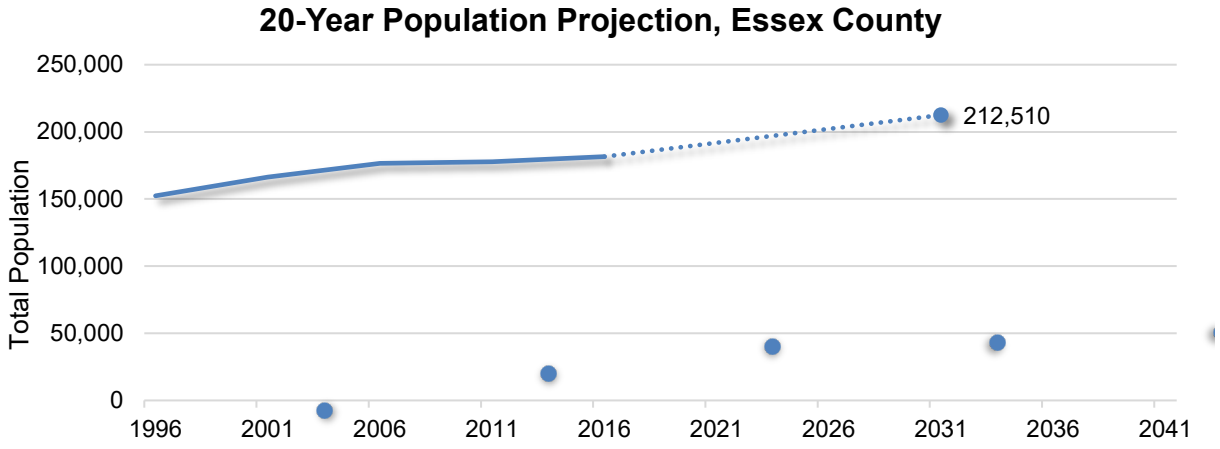


Figure 3: Essex County Population Projections (2031)

Employment projections are not included in the Essex County Official Plan, but the 2010 Foundation Report for the Essex County Official Plan Review indicates a method for projecting jobs that uses existing jobs and populations to determine a job activity rate. Based on the 2006 job activity rate (58,700 / 176,920 = 33.18%), the number of jobs in 2031 is estimated at approximately 70,500. In summary, it is estimated that 212,510 people and 70,500 jobs will exist in Essex County in 2031.

2.3.2 Town of LaSalle

As identified in the Town of LaSalle Official Plan (2018), the Town is anticipated to grow to 60,000 people and 20,000 jobs over the next 20 years. However, despite the significant development potential, recent growth has been modest, which makes future population and employment growth difficult to estimate. It should also be noted that the 20-year estimates (2011-2031) presented in the County of Essex Official Plan for the Town of LaSalle are lower than the Town of LaSalle Official Plan. The Town of LaSalle population projections from both Official Plans are shown in **Figure 4.**

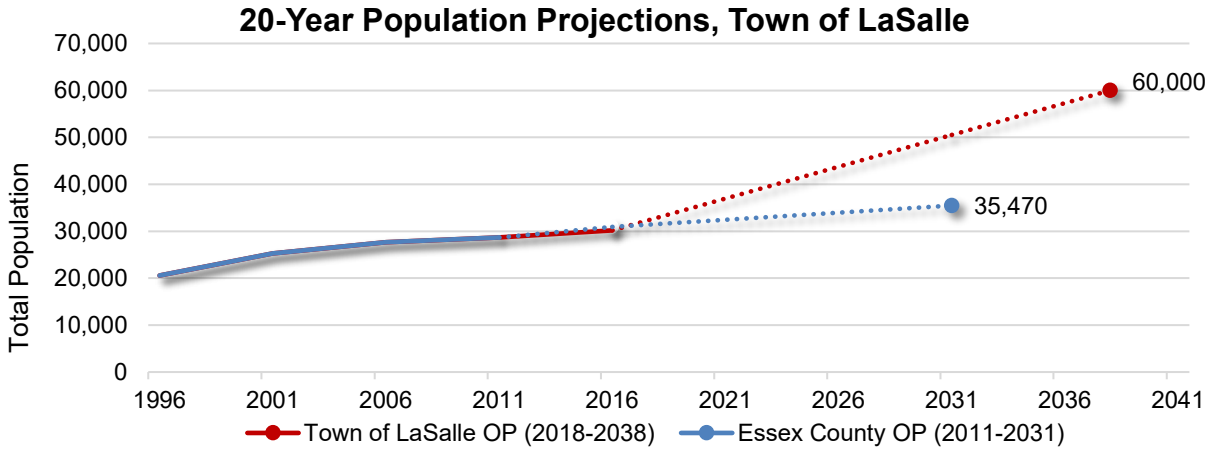


Figure 4: Projected Population Growth for the Town of LaSalle

2.3.3 City of Windsor

The City of Windsor Official Plan provides low and high estimates for 20-year population growth from 2006 to 2026. As shown below in **Figure 5**, the actual population statistics for the City of Windsor observed from 2006 to 2016 are slightly lower than the estimated population, which means the 2026 population estimates will only be reached if rapid growth occurs over the next ten years. As the major employment centre of the region, employment growth is expected to continue in Windsor, resulting in an increase in employment from 120,000 jobs (2006) to over 140,000 jobs (2026).

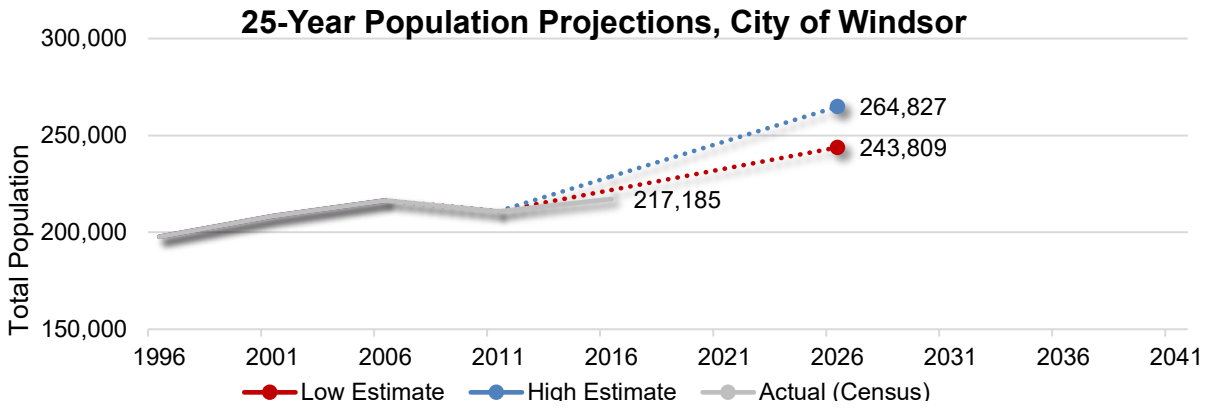


Figure 5: Projected Population Growth for the City of Windsor (2006-2031)

2.4 Road Network

Malden Road is a major arterial road providing north-south connections between the City of Windsor and the Town of Amherstburg, serving a mixture of local and regional trips within the Town of LaSalle and beyond. The segment of Malden Road south of Reaume Road was originally under the jurisdiction of the County of Essex but was modified in 2020 to become a 'County Connecting Link' thus transferring jurisdiction to the Town of LaSalle. The new modified boundary line for the County Connecting Link is now Golfview Drive, south of the project limits. The EA study limits are on Malden Road comprising approximately 3.6 km in length from north to south which is under the jurisdictional control of the Town of LaSalle.

Within the study area, Malden Road operates with a four-lane cross-section (two lanes in each direction) between Todd Lane and Normandy Street and a two-lane cross-section (one lane in each direction) south of Normandy Street to Meagan Drive. The posted speed limit is 50 km/h. The study area for our traffic analysis includes five signalized intersections and eight un-signalized intersections along the corridor.

The characteristics of the major roads and intersection lane configurations within the study area are described below with specific intersection schematic layouts from the Synchro modelling software visualized in **Figure 6**.

Todd Lane: is an east-west collector road under the jurisdiction of the Town of LaSalle. It operates with a two-lane cross-section within the study limits and terminates at its western extent at Malden Road forming a 4-legged roundabout. The posted speed limit for Todd Lane is 50 km/h within the study area. Todd Lane provides direct access to Highway 401 eastbound and Huron Church Road, which provides a connection to Highway 401 westbound.

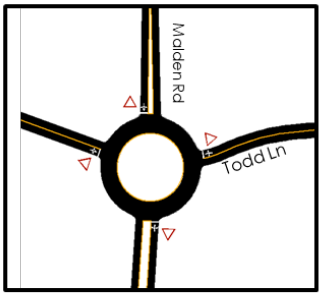
Sprucewood Avenue: is an east-west arterial corridor under the jurisdiction of the Town of LaSalle. It operates with a two-lane cross-section and terminates at its eastern terminus as a signalized intersection at Malden road with dedicated turning lanes. The posted speed limit for Sprucewood Avenue is 50 km/h within the study area. Sprucewood Avenue provides access to Ojibway Parkway in the west and serves as an alternative route to access Highway 401 via Ojibway Parkway.

Normandy Street: is a two-lane collector road under the jurisdiction of the Town of LaSalle. It provides an east-west connection between Malden Road and Huron Church Line Road and has a posted speed limit of 50km/hr. It mostly serves residential uses.

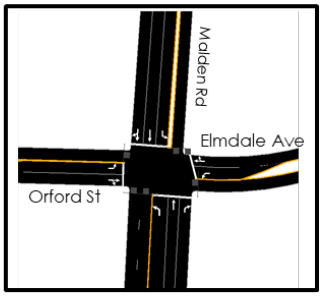
Laurier Parkway: is an east-west arterial corridor under the jurisdiction of the Town of LaSalle. Under the Town's Official Plan, the roadway is also recognized as a mixed-use corridor. It operates with a two-lane cross-section and intersects Malden Road as a signalized intersection with dedicated turning lanes. The posted speed limit for Laurier Parkway is 50 km/h within the study area. West of Malden Road, Laurier Parkway becomes Laurier Drive, a minor collector road.

All the other roadways intersecting with Malden Road are either local roads or minor collector roads providing access to local residential areas with a posted speed limit of 50 km/h or less.

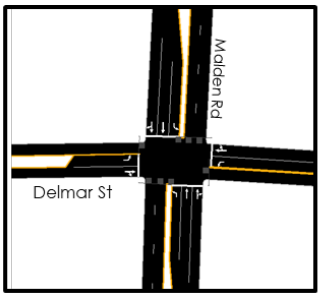
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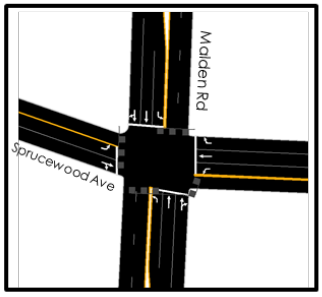
Malden Rd & Todd Ln



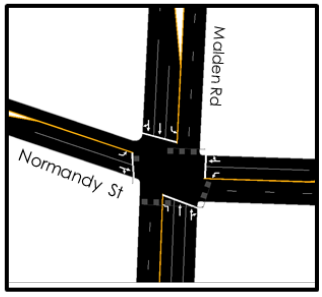
Malden Rd & Orford St / Elmdale Ave



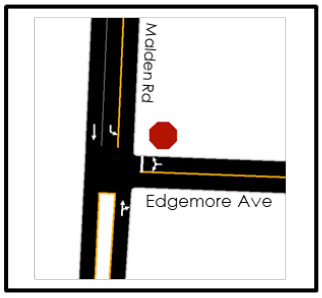
Malden Rd & Delmar St



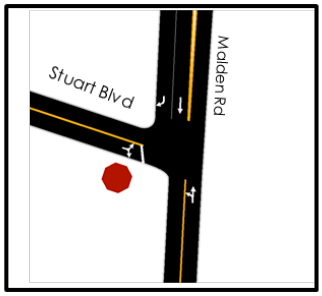
Malden Rd & Sprucewood Ave



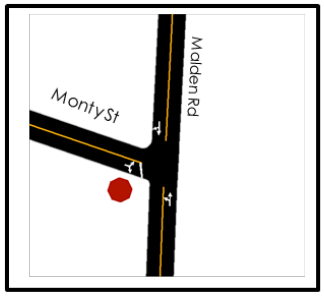
Malden Rd & Normandy St



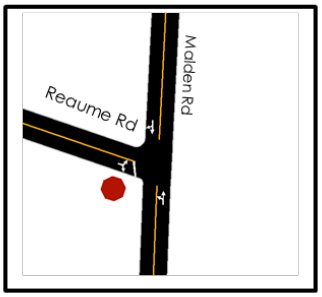
Malden Rd & Edgemore Ave



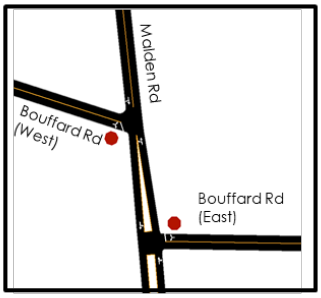
Malden Rd & Stuart Blvd



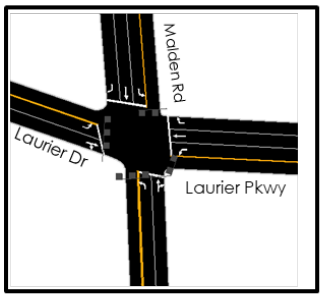
Malden Rd & Monty St



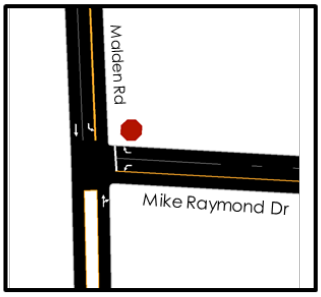
Malden Rd & Reaume Rd



Malden Rd & Bouffard Rd (West)
Malden Rd & Bouffard Rd (East)



Malden Rd & Laurier Dr



Malden Rd & Mike Raymond Dr

Figure 6: Existing (2019) Intersection Lane Configurations

2.5 Transit Network

Windsor Transit, in partnership with the Town of LaSalle, operates one route (LaSalle 25) within the town, Monday to Sunday from 7:00 a.m. to 7:00 p.m. with one bus. An additional bus is added to the route during the morning and afternoon peak hours.

During the peak periods the route is served by two buses, one starting at St. Clair College and one in the area of Morton Drive at Front Road. It takes approximately 45 minutes for one bus route to travel the entire route and captures approximately 70% of the houses located in LaSalle's urban area (within 400m of the route).

The LaSalle 25 routes serves the section of Malden Road between Mike Raymond Drive and Delmar Street with eleven stops in the northbound direction and nine stops in the southbound direction. The portion of the route between Mike Raymond Drive and Reaume Road only operates in the northbound direction, with the remaining portion receiving bi-directional service. **Figure 7** illustrates the Transit route and the stop locations.

Passengers travelling on the LaSalle 25 route are able to transfer to the following Transit Windsor routes: South Windsor 7, Dougall 6 and Dominion 5. South Windsor 7 travels to Devonshire Mall and Walker Rd. Dougall 6 and Dominion 5 travel to downtown Windsor as shown in **Figure 8**.

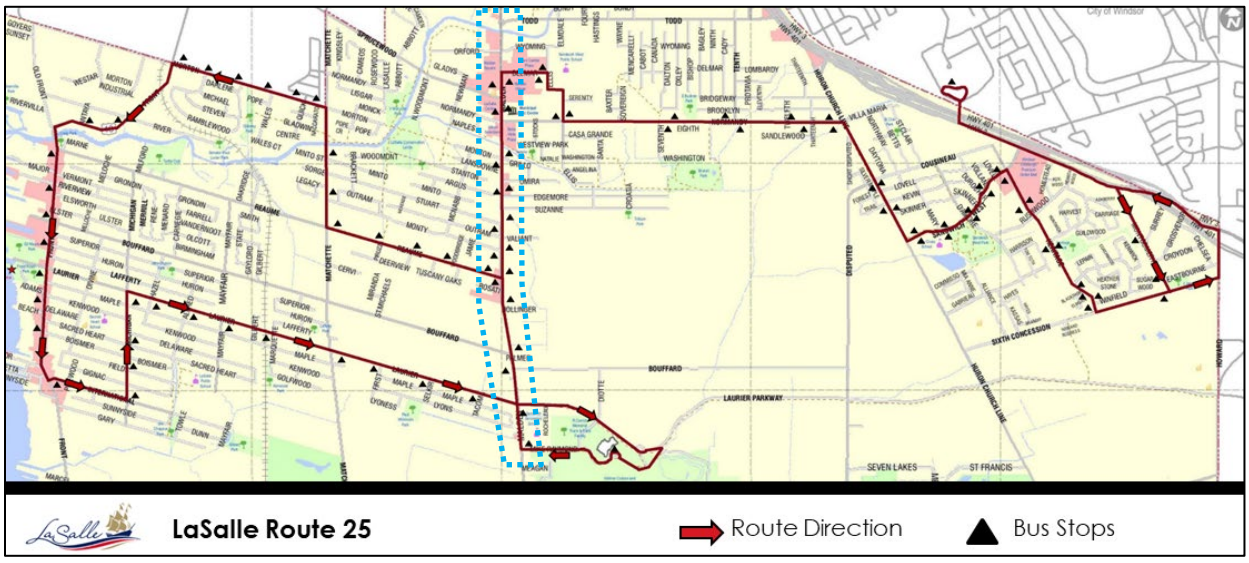


Figure 7: LaSalle 25 Route Transit Map

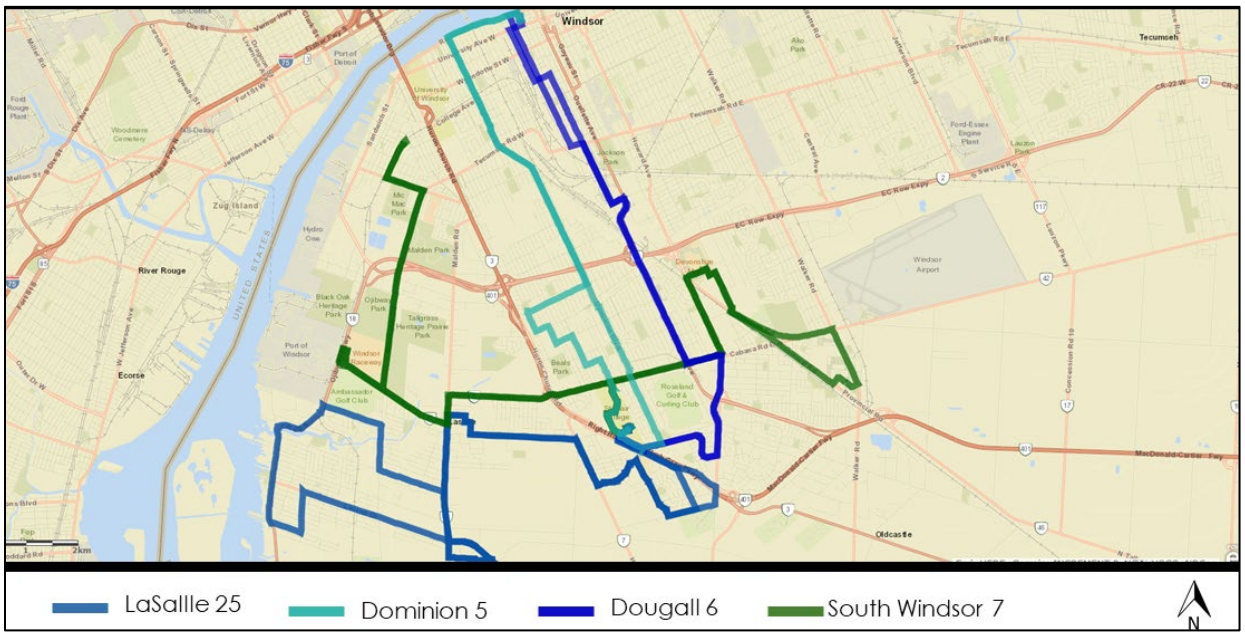


Figure 8: Windsor Transit Routes Connecting to the LaSalle 25 Route

2.6 Cycling and Pedestrian Network

The northern section of Malden Road between Todd Lane and Normandy Street has a wide buffered concreted sidewalk on both sides. This section of the roadway also has Shared Lane Markings or “Sharrows” to indicate a shared environment for bicycles and motor vehicles. The shared lane markings highlight cycling routes, provide wayfinding guidance, and alert all road users to the presence of bicycles but do not provide a dedicated cycling facility. **Figure 9** shows the active transportation facilities on Malden Road between Todd Lane and Normandy Street.

The section of Malden Road south of Normandy Street, to Reaume Road, has a multi-use path that runs along the eastern side. The multi-use path lanes are asphalt paved and consist of one lane in each direction for bicycles and separate space for pedestrians, although visibility of the pavement markings vary by season. The section of the roadway also has a thin paved shoulder on the west side. **Figure 10** shows the active transportation facilities on Malden Road between Normandy Street and Reaume Road.

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The section of Malden Road south of Reaume Road to the southern study area limits has a paved shoulder on the east side and an unpaved shoulder on the west side. Though there are intermittent sidewalks along the commercial developments, no cycling facilities are present in this section of the roadway. **Figure 11** shows the active transportation facilities on Malden Road between Reaume Road and the southern study limits.

All signalized intersections within the study area contain at least one set of pedestrian signals and crosswalks per direction. An unsignalized pedestrian crossing is present on the northern approach of the intersection of Reaume Road and Malden Road. No mild block pedestrian crossing facilities currently exist within the study area.

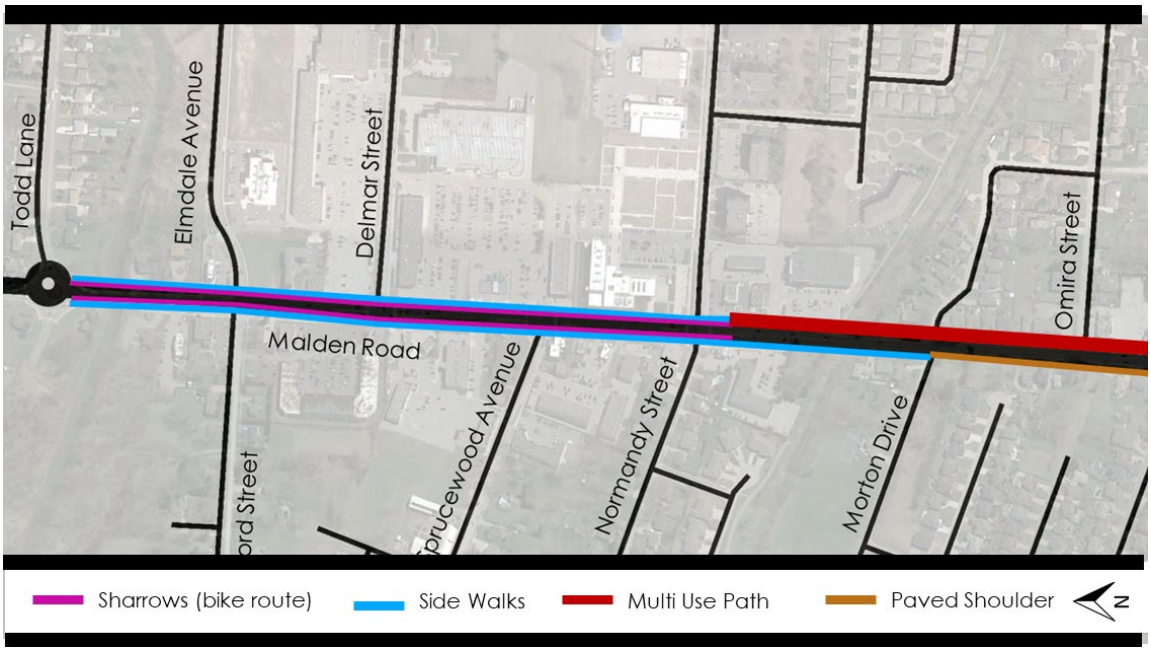


Figure 9: Active TransportationFfacilities on Malden Road | Todd Lane to Omira Street

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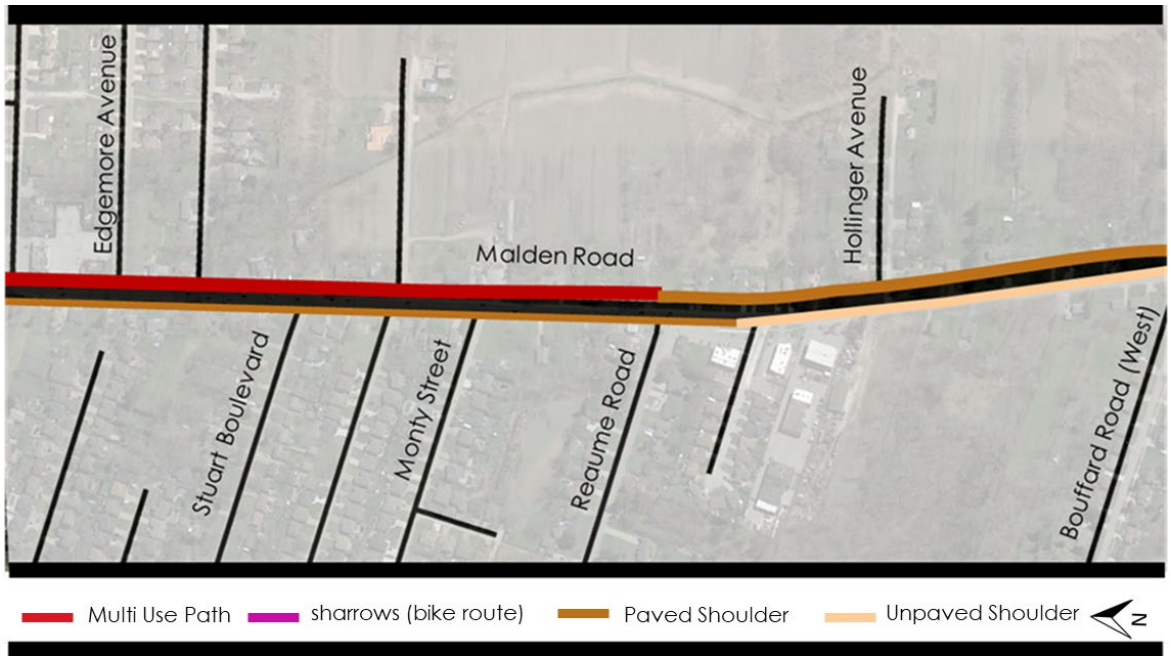


Figure 10: Active Transportation Facilities on Malden Road | Omira Street to Bouffard Road(West)

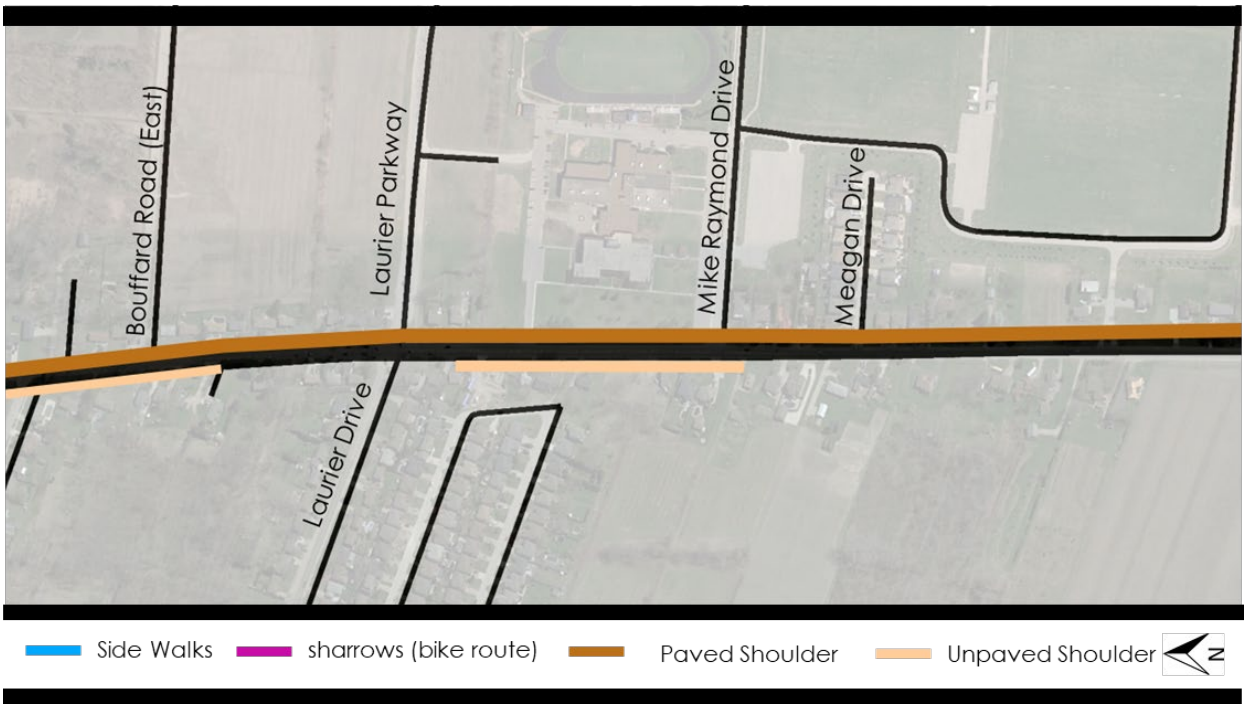


Figure 11: Active Transportation Facilities on Malden Road | Bouffard Road(East) to Meagan Drive

Malden Road is an important corridor for multimodal connections to adjacent municipalities. The County Wide Active Transportation Study (CWATS) Master Plan completed in 2012 identified Malden Road as a candidate route for alternative active transportation route analysis. One of the important objectives of the study was to identify a continuous and connected county wide active transportation network that builds upon, connects, and supports existing and planned local municipal routes and facilities. The study proposed a multi-use trail between Normandy Street and Todd Lane and a context sensitive solution south of Reaume Road to the southern study area limits. A context sensitive solution is proposed as this section of roadway is considered to be a highly desirable active transportation route but would require a design solution that meets the needs of the Town of LaSalle considering site specific criteria and design challenges or opportunities. **Figure 12** and **Figure 13** show the preferred network proposed by the CWATS Master Plan.

Malden Road has also been identified for active transportation network improvements in the Town's Transportation Master Plan (TMP). The TMP's network proposes an upgrade to the existing in-boulevard pathway for the entire extent of Malden Road within the study area. **Figure 14** shows the preferred future active transportation network proposed by the TMP.

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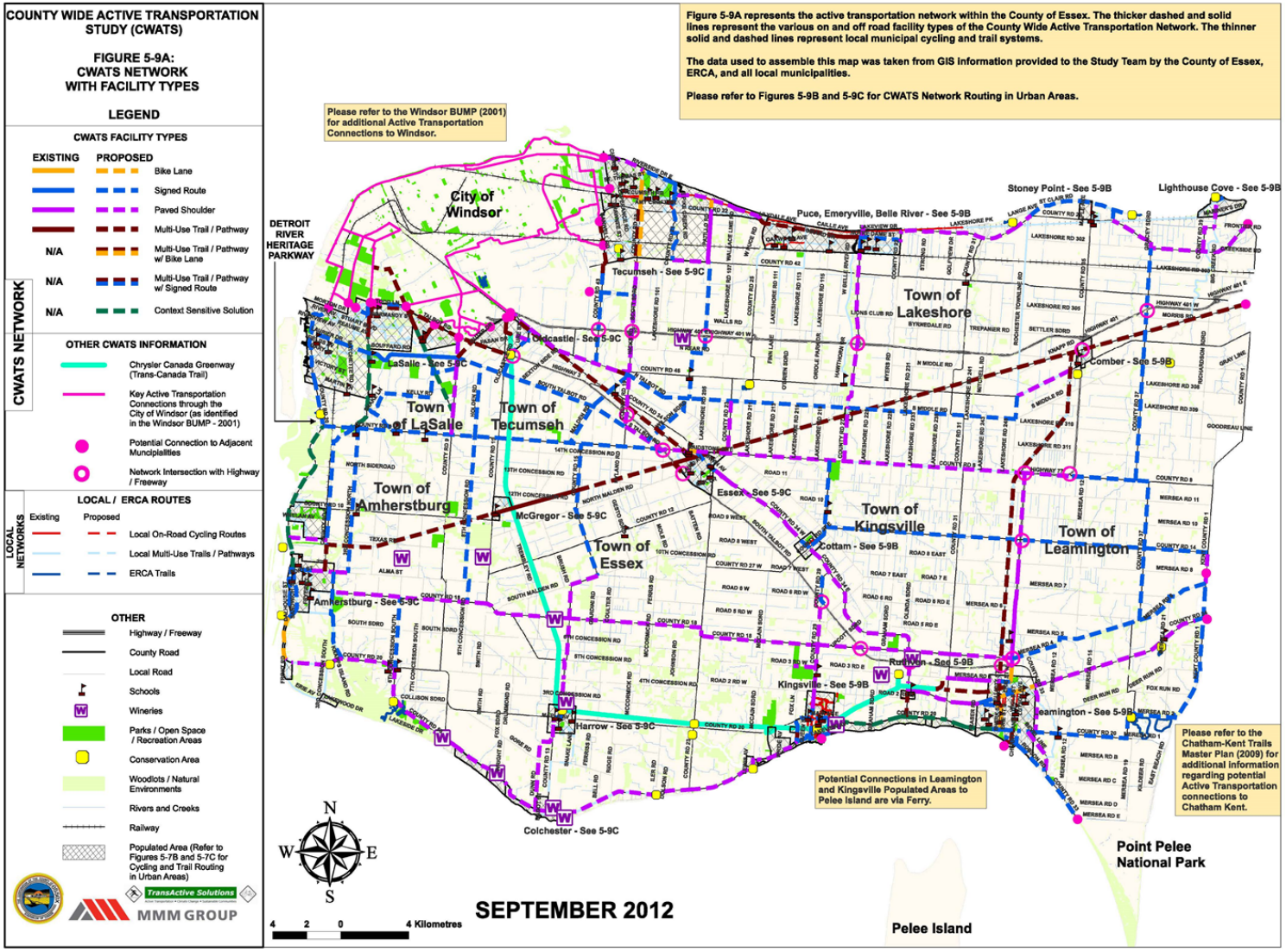


Figure 12: Preferred Active Transportation Network - CWATS Plan

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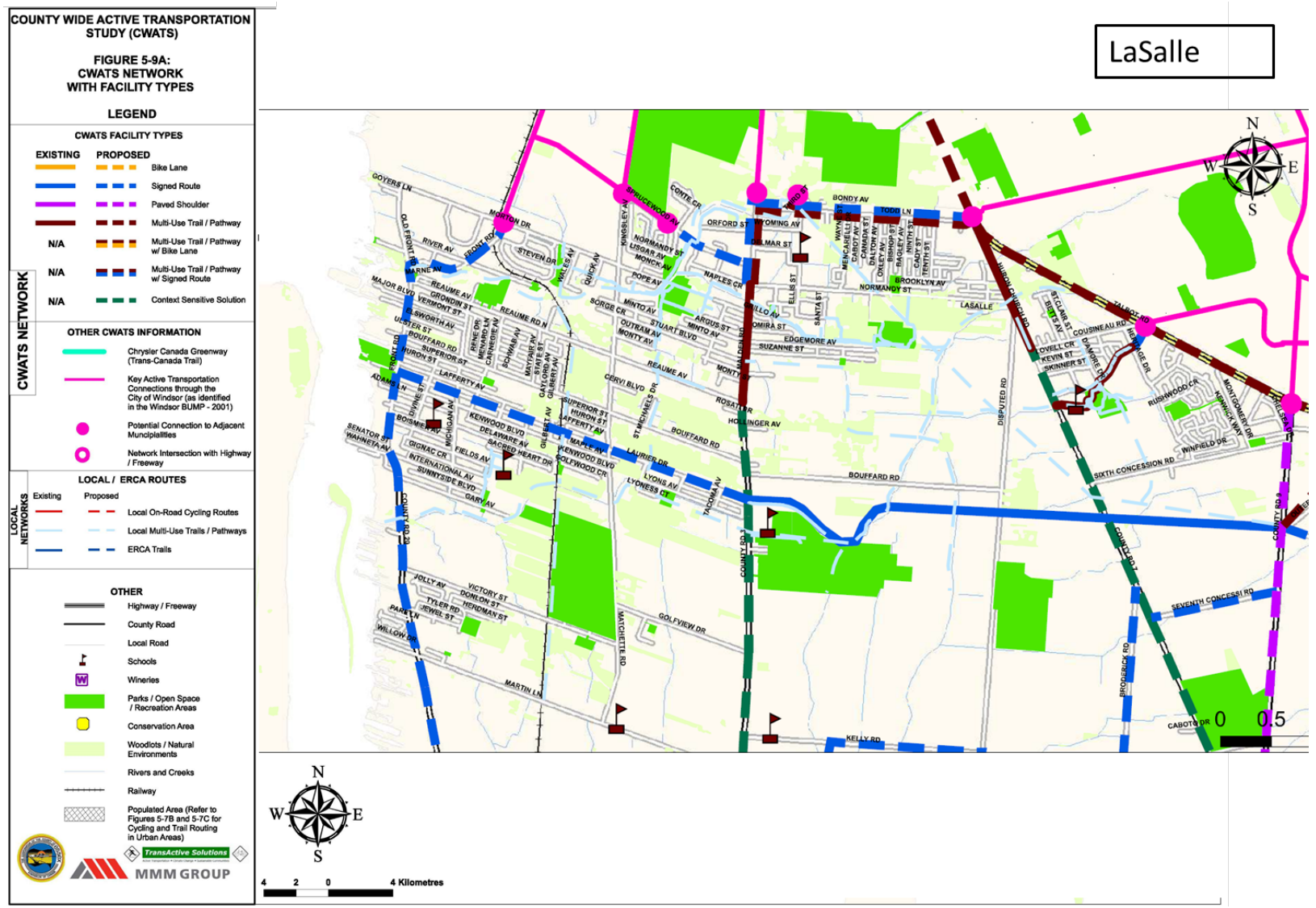


Figure 13: Preferred Active Transportation Network - CWATS Plan (Lasalle Town)

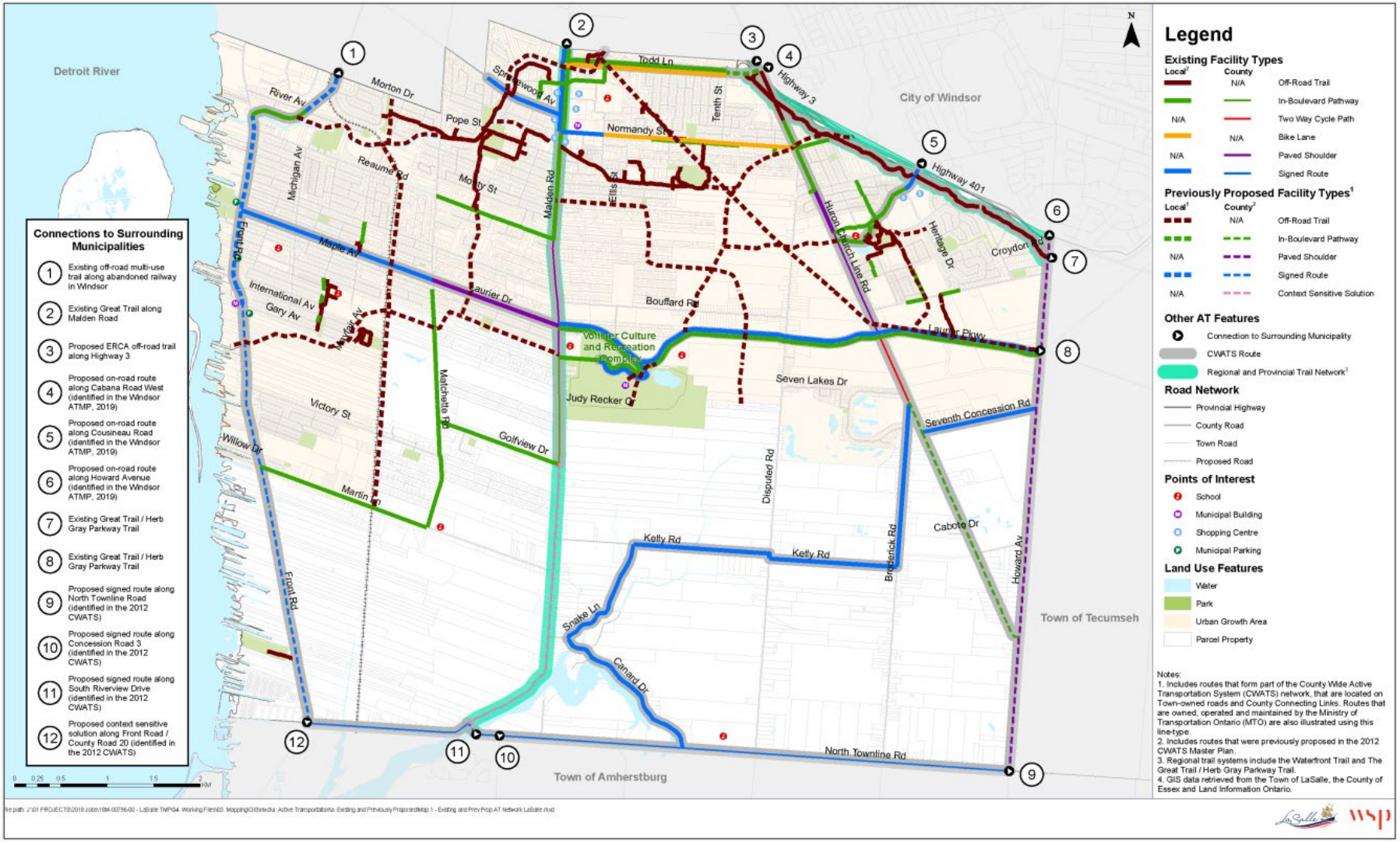


Figure 14: Proposed Active Transportation Network (LaSalle TMP, 2020)

3.0 Existing (2019) Traffic Conditions

3.1 Existing (2019) Traffic Volumes

The existing traffic counts for the study area intersections were conducted by Ontario traffic Inc. on behalf of Stantec for the AM, Mid-day, and PM peak hours. Motor vehicle traffic and pedestrian crossings were counted in 15-minute intervals with vehicles classified by type. **Table 2** shows a summary of the intersections and dates the counts were conducted. Due to project timelines, counts were collected during the summer and a 4.30% growth factor was applied to peak counts to reflect the variation between summer and school-year traffic. This growth percentage was derived by observing the seasonal variations in vehicular traffic on the local highway network using MTO data and is summarized in **Table 3.**

Table 2: Traffic Data Collected for the Study

Intersection ID	Intersection Name	Date of Count
101	Malden Road & Todd Lane	August 01, 2019
102	Malden Road & Orford Street / Elmdale Avenue	August 01, 2019
103	Malden Road & Delmar Street	August 01, 2019
104	Malden Road & Sprucewood Avenue	August 01, 2019
105	Malden Road & Normandy Street	August 01, 2019
106	Malden Road & Edgemore Avenue	July 31, 2019
107	Malden Road & Stuart Boulevard	July 31, 2019
108	Malden Road & Monty Street	July 31, 2019
109	Malden Road & Reaume Road	July 31, 2019
110	Malden Road & Bouffard Road (West)	July 31, 2019
111	Malden Road & Bouffard Road (East)	July 31, 2019
112	Malden Road & Laurier Drive / Laurier Parkway	July 31, 2019
113	Malden Road & Mike Raymond Drive	July 31, 2019

Table 3: Seasonal Growth Rate

Count location	Annual Average Daily Traffic (AADT)	Summer Average Weekday Daily Traffic (SAW)	% Change
Highway 3 (Todd Lane(S)/Cabana Road (N))	9,700	9,300	4.30

The signal timing plans for the signalized intersections were received from the Town and coded into the Synchro models. The existing (2019) year traffic volumes for the AM and PM peak hours used for the existing traffic analysis are presented in **Figure 15** and **Figure 16**. Detailed traffic counts and signal timing plans are provided in **Appendix A** and signal timing plans are provided in **Appendix D**.

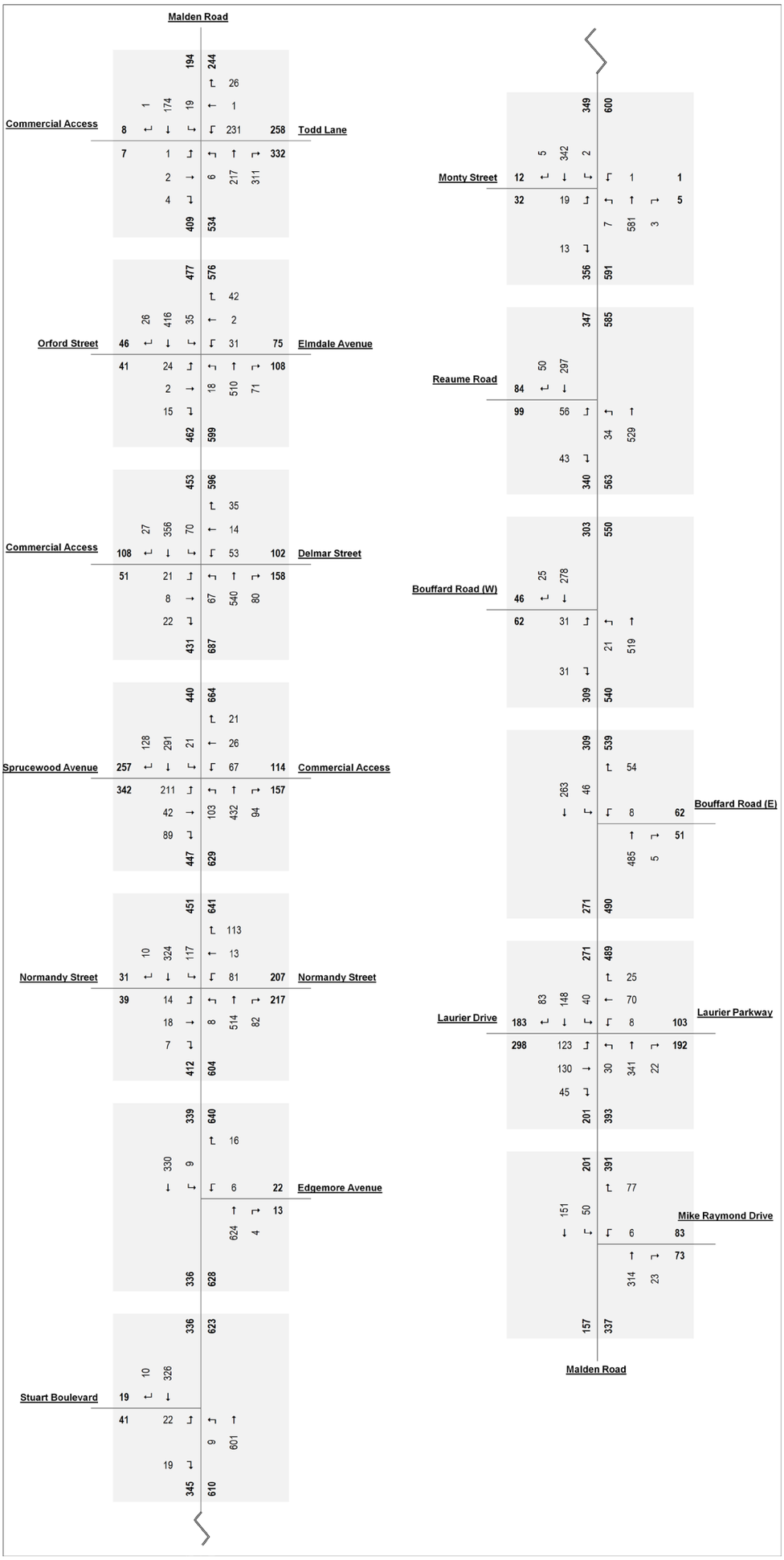


Figure 15: Existing (2019) - AM Peak Hour Volume

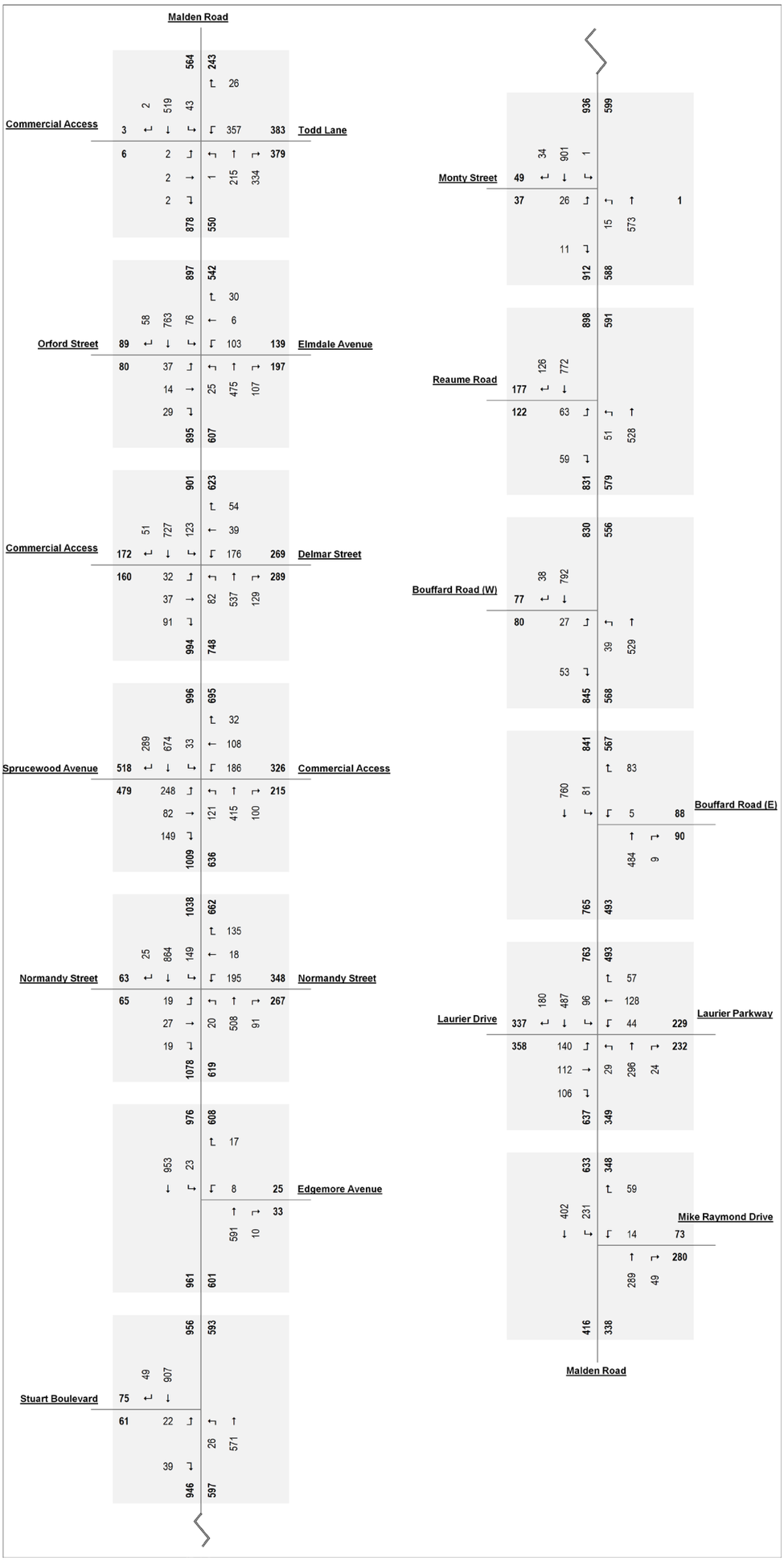


Figure 16: Existing (2019) - PM Peak Hour Volume

3.2 Existing (2019) Roadway Capacity Analysis

The roadway (link) level capacity analysis for the existing (2019) condition was conducted using the volume to capacity (v/c) ratio. The v/c ratio for each corridor segment was calculated using balanced traffic volumes and planning-level roadway capacity. Based on the roadway type (e.g., arterial road) and adjacent land use, capacity was assumed to be 900 vehicles per hour (vph) per lane.

The v/c ratios for Malden Road segments are presented in **Figure 17** and **Figure 18** for the morning and afternoon peak hours, respectively, showing that northbound is the peak direction during AM peak hour and southbound is the peak direction during PM peak hour. Generally, in the morning peak hour Malden Road has available capacity along the entire study corridor with higher volumes close to collector or arterial roadways such as Reaume Road or Sprucewood Avenue. In the afternoon peak hour, the roadway is approaching capacity on the two-lane cross-section portions of Malden Road south of Normandy Street and primarily in the southbound direction which emphasizes the directional nature of the corridor between the morning and afternoon periods.



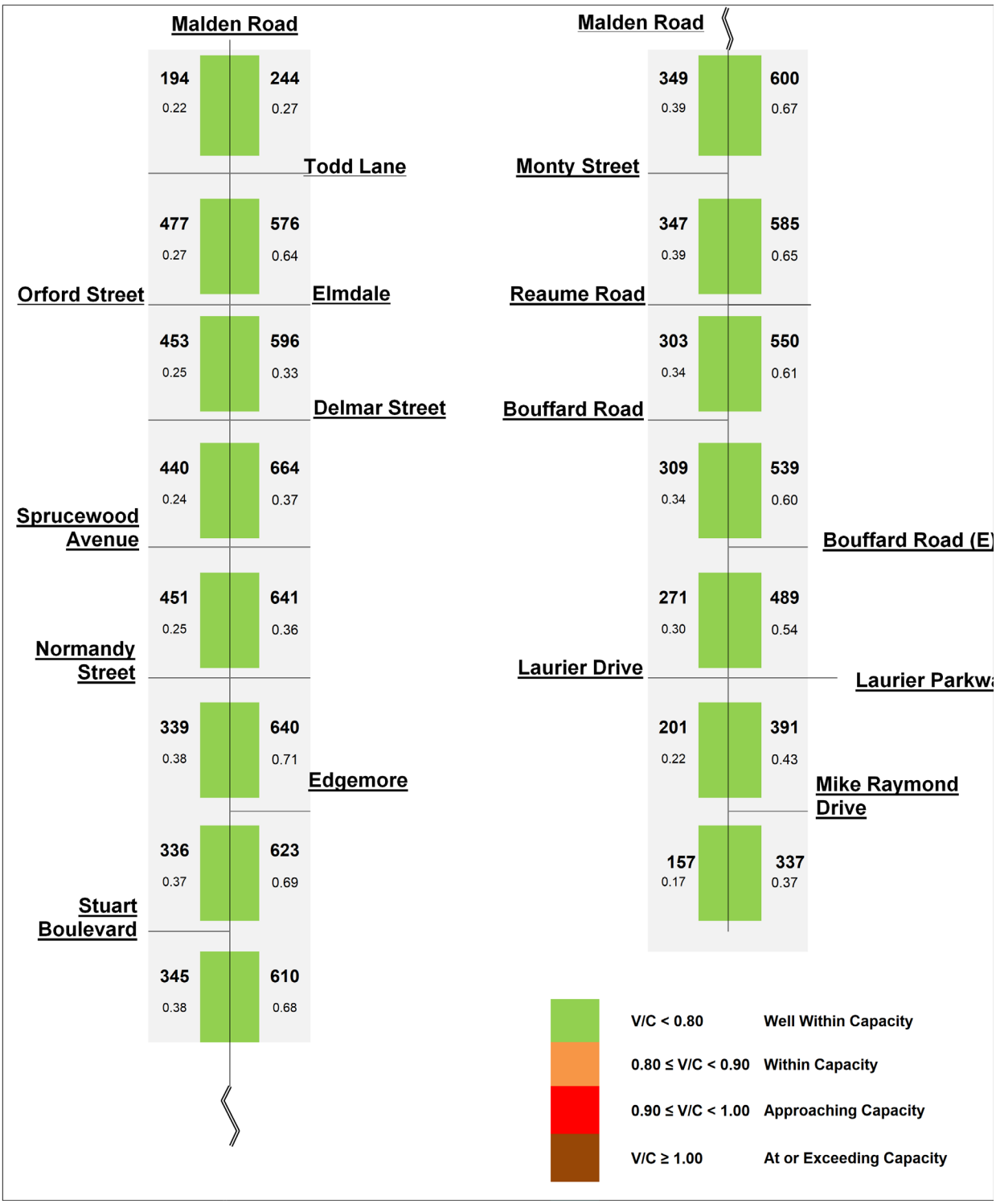


Figure 17: Roadway Link Volume-to-Capacity (V/C) Analysis for Existing (2019) AM Peak Hour

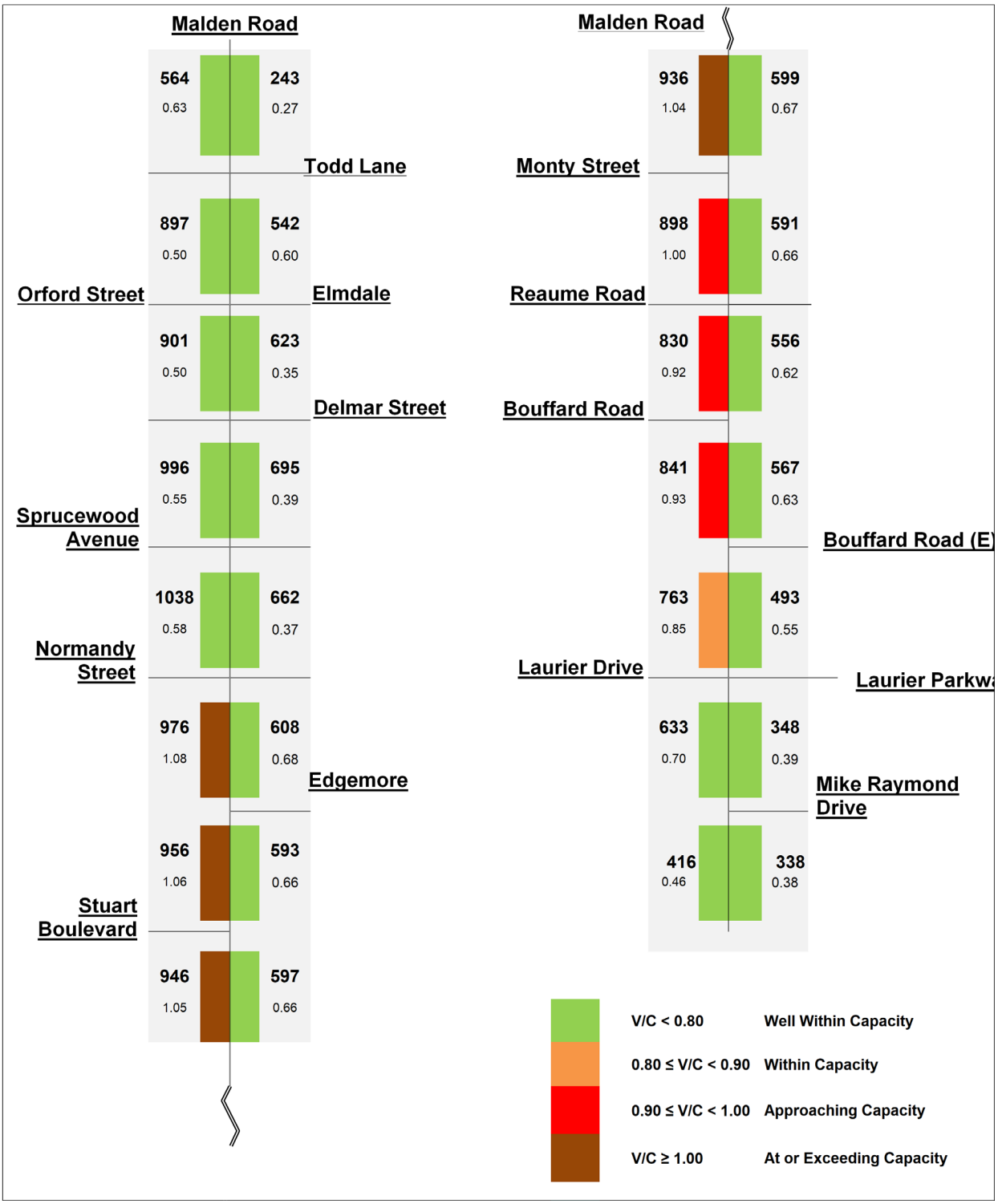


Figure 18: Roadway Link Volume-to-Capacity (V/C) Analysis for Existing (2019) PM Peak Hour

3.3 Existing (2019) Intersection Operational Analysis

The quality of intersection operations at signalized and unsignalized intersections is evaluated in terms of level of service (LOS) and volume to capacity (v/c) as defined by the Highway Capacity Manual (HCM). LOS is evaluated on the basis of average control delay per vehicle and includes deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Capacity is evaluated in terms of ratio of demand flow to capacity with an at-capacity condition represented by a v/c ratio of 1.00 (i.e., volume demand equals theoretical capacity). For signalised intersections, LOS ranges from LOS A for 10 seconds or less average delay to LOS F for average delay greater than 80 seconds. For unsignalized intersections, the LOS ranges from LOS A for 10 seconds or less average delay to LOS F for average delay greater than 50 seconds (See **Table 4**).

Table 4: Intersection Level of Service Delay Criteria

Level of Service (LOS)	Signalized Intersections	Unsignalized Intersections
A	≤10s	≤10s
B	>10s and ≤20s	>10s and ≤15s
C	>20s and ≤35s	>15s and ≤25s
D	>35s and ≤55s	>25s and ≤35s
E	>55s and ≤80s	>35s and ≤50s
F	>80s	>50s

To assess the existing peak hour traffic conditions, a level of service analysis was undertaken for the study area intersections using the Trafficware Synchro 10 intersection capacity analysis software, which implements the methodology of the Highway Capacity Manual. The key parameters used in the analysis include:

- Existing lane configurations;
- Heavy vehicle percentages as derived from traffic count data;
- Calculated Peak Hour Factor (PHF) based on counts for each intersection.
- Lane widths as observed through Google Maps aerial photographs;
- Synchro default values for all other inputs.

The operational results for the AM and PM peak hour existing conditions are summarized in **Table 5**, with the Synchro analysis outputs provided for reference in **Appendix B**. Queueing and a comparison of the existing available storage lane length and analysed 95th percentile queue lengths were reviewed for critical movements. Detailed queuing results can be found in **Appendix B**.



In general, existing AM and PM peak hour operations operate well throughout the entire corridor with all intersections and movements operating at a LOS of 'C' or better in the morning and only four movements in the afternoon operating at a LOS 'E' or worse. These movements are highlighted in **Table 5** and include:

- The southbound through movement at Malden Road & Sprucewood Avenue (LOS 'E').
- The eastbound approach at Malden Road & Stuart Boulevard (LOS 'E').
- The eastbound approach at the Malden Road & Monty Street (LOS 'E').
- The eastbound approach at the Malden Road & Reaume Road (LOS 'F'). None of the 95th percentile queues for any of the movements exceed their available storage length.

Table 5: Existing Conditions Intersection Level-of-Service Analysis | Peak Hour

Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storag length (m)
		LOS	Delay	v/c	Q (m)	LOS	Delay	v/c	Q (m)	
Malden Road & Todd Lane *(Roundabout)*	WB	B	12	0.44	0.9	C	19	0.65	2.1	-
	SB	A	10	0.33	0.6	F	165	1.06	29.2	-
	EB	A	7	0.01	0	B	11	0.02	0	-
	NB	D	27	0.79	4.2	D	32	0.83	5.1	-
Malden Road & Orford Street/Elmdale Avenue *(Signalized)*	EBL	B	13	0.06	8	B	13	0.07	11	30
	EBT	B	13	0.01	5	B	13	0.04	9	-
	WBL	B	13	0.06	10	B	14	0.19	25	12
	WBT	B	13	0.04	7	B	12	0.03	7	-
	NBL	A	2	0.05	0	A	8	0.16	2	66
	NBT	B	15	0.80	33	B	17	0.77	21	-
	NBR	A	0	0.06	0	A	2	0.08	0	-
	SBL	B	17	0.21	8	C	24	0.41	16	88
	SBT	B	16	0.36	26	C	23	0.65	57	-
	Intersection	***B***	***14***	***0.42***	***-***	***B***	***19***	***0.46***	***-***	***-***
Malden Road & Delmar Street *(Signalized)*	EBL	B	16	0.04	7	B	18	0.08	11	20
	EBT	B	16	0.03	6	B	18	0.14	17	-
	WBL	B	17	0.13	14	C	24	0.45	47	45
	WBT	B	16	0.05	9	B	18	0.11	16	-
	NBL	A	9	0.17	4	C	22	0.40	9	23
	NBT	B	18	0.65	63	C	24	0.63	74	-
	SBL	B	14	0.25	9	B	15	0.43	11	23
	SBT	B	16	0.41	22	B	19	0.75	33	-
	Intersection	***B***	***16***	***0.36***	***-***	***C***	***21***	***0.58***	***-***	***-***
Malden Road & Sprucewood Avenue *(Signalized)*	EBL	C	25	0.41	40	C	31	0.75	50	105
	EBT	C	25	0.52	19	C	32	0.63	42	-
	WBL	B	20	0.19	15	C	30	0.47	38	50
	WBT	C	23	0.18	9	C	28	0.60	28	-
	WBR	C	23	0.06	0	C	25	0.27	0	50
	NBL	B	18	0.02	14	D	44	0.02	36	21
	NBT	C	23	0.31	39	C	35	0.64	59	-

Existing (2019) Traffic Conditions
October 15, 2021

Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storag length (m)
		LOS	Delay	v/c	Q (m)	LOS	Delay	v/c	Q (m)	
	SBL	B	15	0.54	6	C	25	0.45	8	21
	SBT	C	28	0.07	44	E	57	0.09	112	-
	Intersection	***C***	***24***	***0.50***	***-***	***D***	***42***	***0.76***	***-***	***-***
Malden Road & Normandy Street *(Signalized)*	EBL	B	13	0.03	5	B	15	0.05	6	30
	EBT	B	13	0.03	7	B	15	0.06	10	-
	WBL	B	19	0.22	23	C	26	0.48	58	33
	WBT	B	18	0.11	14	C	20	0.13	17	-
	NBL	B	16	0.03	3	B	18	0.11	5	24
	NBT	C	32	0.75	60	C	27	0.61	55	-
	SBL	C	27	0.54	22	B	16	0.50	11	22
	SBT	B	15	0.44	21	C	33	0.92	91	-
	Intersection	***C***	***24***	***0.46***	***-***	***C***	***28***	***0.64***	***-***	***-***
Malden Road & Laurier Drive/ Laurier Parkway (Signalized)	EBL	C	21	0.36	27	C	21	0.36	29	50
	EBT	C	27	0.47	48	C	31	0.53	52	-
	WBL	C	27	0.04	4	C	25	0.15	11	46
	WBT	C	30	0.29	23	C	32	0.41	36	-
	WBR	C	28	0.02	0	C	29	0.04	0	46
	NBL	B	13	0.07	8	B	16	0.11	7	45
	NBT	C	21	0.55	91	C	24	0.52	77	-
	SBL	B	12	0.12	9	B	13	0.23	18	81
	SBT	B	15	0.22	36	C	26	0.70	141	-
	SBR	B	14	0.07	1	B	16	0.15	18	46
	Intersection	***C***	***21***	***0.51***	***-***	***C***	***25***	***0.62***	***-***	***-***
Malden Road & Edgemore Avenue *(Un-Signalized)*	WBLR	C	17	0.07	2	C	24	0.12	3	-
	SBL	A	9	0.01	0	A	9	0.03	1	64
Malden Road & Stuart Boulevard *(Un-Signalized)*	EBLR	C	18	0.14	4	E	37	0.37	12	-
	NBL	A	0	0.01	0	A	1	0.05	1	-
Malden Road & Monty Street *(Un-Signalized)*	EBLR	C	18	0.11	3	E	45	0.31	9	-
	NBL	A	0	0.01	0	A	1	0.03	1	-
Malden Road & Reaume Road	EBLR	C	20	0.32	10	F	78	0.78	38	-

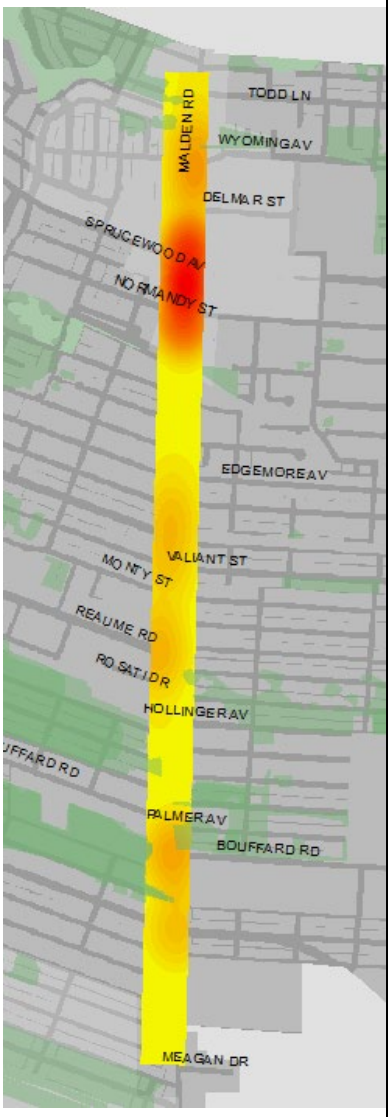
Existing (2019) Traffic Conditions
October 15, 2021

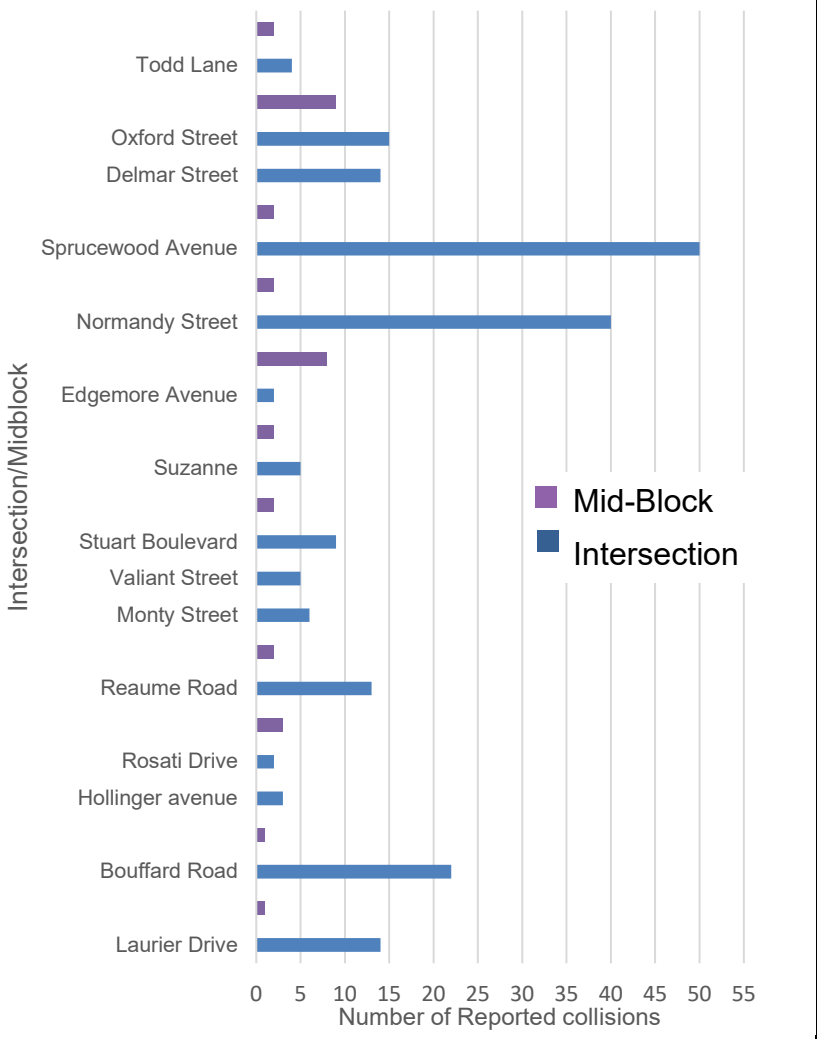
Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storag length (m)
		LOS	Delay	v/c	Q (m)	LOS	Delay	v/c	Q (m)	
(Un-Signalized)	NBL	A	1	0.03	1	A	2	0.08	2	-
Malden Road & Bouffard Road (West) *(Un-Signalized)*	EBLR	C	16	0.16	4	D	30	0.37	12	-
	NBL	A	1	0.02	0	A	2	0.05	1	-
Malden Road & Bouffard Road (East) *(Un-Signalized)*	WBLR	B	15	0.15	4	B	15	0.19	5	-
	SBL	A	2	0.05	1	A	2	0.09	2	-
Malden Road & Mike Raymond Drive *(Un-Signalized)*	WBL	B	11	0.01	0	C	19	0.05	1	-
	WBR	B	11	0.12	3	B	11	0.09	2	-
	SBL	A	8	0.04	1	A	9	0.22	6	-

4.0 Collision Data Analysis and Safety Review

The collision data for the study area intersections and mid-blocks were collected from the Town of LaSalle and Accident Support Services Ltd. (from 2014 to 2019). The collision data identifies the total number of collisions, characteristics related to initial impact types, types of collisions (i.e., 'Property Damage Only' (PDO), 'Non-Fatal', or 'Fatal'), and environmental conditions. Within the data collection period, a total of 239 collisions were recorded in the study area corridor. The distribution of collisions at/between intersections is presented in **Table 6**.

Table 6: Collisions in Intersections and Midblock (2014-2019)





4.1 Collisions at Intersections

Within a five-year period, 204 out of the 239 total collisions (approximately 85%) were recorded at study area intersections (as opposed to mid-block locations). Most of the collisions at intersections occurred under a 'clear' weather condition (83%). The primary impact type was 'rear-end' (46%), followed by 'turning movement' and 'angle' which accounted for 35% and 9%, respectively. Approximately 68% of the collisions resulted in PDO and approximately 29% of the collisions resulted in 'Injury' (i.e., non-fatal). No 'fatal' collisions were reported at an intersection within the study area in the last five years. The details of collision data for the study area intersections are presented in **Appendix C**.

Approximately 24% of the total intersection related collisions occurred at the Sprucewood Avenue intersection and another 19% at the Normandy Street intersection. Using the number of collisions and traffic volumes entering the respective intersections, a collision rate for each intersection was calculated (using equation one derived from the Federal Highway Administration's Road Safety Fundamentals), reflecting an average number of collisions per million vehicles (CPM) approaching the intersection as summarized in **Table 7.**

The Sprucewood Avenue and Normandy Street intersections have experienced 50 and 40 collisions during the five-year period (2014 to 2019), which resulted in a collision rate of 1.88 and 1.76 CPM. Additionally, Bouffard Road (East) has a collision rate approaching similar levels at 1.46 CPM despite only 22 collisions reported. The collision rates for other study intersections are all less than 0.77 CPM for the five-year period, which indicates a relatively low rate compared to the Sprucewood Avenue, Normandy Street and Bouffard Road intersections.

Equation 1: Collision Rate equation

$$C_r = \frac{C\ x10^6}{(v\ x\ 365\ x\ N\ x\ L)}$$

Where:
C_r - Collision Rate
C – Total Collisions
V – Average Daily Intersection Volume*
N – Number of Years of Data

Table 7: Collision Rate

Intersection Name	V[1]	Collisions	Collision Rate (per million vehicles)
Malden Road & Todd Lane	9,930	4	0.22
Malden Road & Orford Street / Elmdale Avenue	11,920	15	0.72
Malden Road & Delmar Street	12,930	14	0.62
Malden Road & Sprucewood Avenue	15,250	50	1.88
Malden Road & Normandy Street	13,010	40	1.76
Malden Road & Edgemore Avenue	9,890	2	0.12
Malden Road & Stuart Boulevard	9,870	9	0.52
Malden Road & Monty Street	9,730	6	0.17
Malden Road & Reaume Road	10,090	13	0.74
Malden Road & Bouffard Road (West)	9,050	0	0.00
Malden Road & Bouffard Road (East)	8,610	22	1.46
Malden Road & Laurier Drive / Gilroy Street	10,400	14	0.77
Malden Road & Mike Raymond Drive	6,460	0	0.00

4.2 Collisions at Mid-Blocks

Within a five-year period, 35 out of the 239 total collisions (approximately 14%) were recorded at mid-block locations (i.e., between study intersections) along Malden Road. Most of these collisions occurred under ‘clear’ weather conditions (80%). The primary impact type was ‘rear-end’ (37%), followed by ‘turning movement’ and ‘Single Motor Vehicle (other)’ which accounted for 26% and 23%, respectively. Approximately 82% of the collisions resulted in property damage only (PDO) and approximately 18% of the collisions resulted in ‘Injury’ (i.e., non-fatal). No ‘fatal’ collisions were reported in the last five years. The details of the collision data for the study area intersections are provided for reference in **Appendix C**.

** Average daily intersection volume is obtained by assuming that the AM peak hour counts represent 10% the daily volumes entering an intersection*

4.3 Safety Performance Review

In addition to the collision data analysis, a quantitative road safety analysis of the safety performance of 6 study area intersections were also conducted. This analysis was based on the most recent collision data, traffic volume and physical characteristics for the following study area intersections:

- Malden Road & Orford Street
- Malden Road & Sprucewood Avenue
- Malden Road & Normandy Street
- Malden Road & Reaume Road
- Malden Road & Bouffard Road (East)
- Malden Road & Laurier Drive

Approach:

The safety analysis approach used is derived from the AASHTO Highway Safety Manual (HSM) Predictive Method. This method estimates an expected average collision frequency for each of the existing intersections using regression equations called Safety Performance Functions (SPFs). An SPF is a relationship between the amount of traffic approaching a particular type of intersection and its safety performance. The Ministry of transportation of Ontario (MTO) has developed SPF's for several classes of roadways and intersections to estimate expected collision frequencies based on regression analysis of their collision dataset (Equation two). These SPF's are adjusted as necessary using Collision Modification Factors (CMFs) contained in the HSM – Part C to account for existing intersection features (geometry, lighting, turning lanes, etc.).

Equation 2: Ministry of Transportation SPF equation

$$N_{expected} = Exp(b_0) \times F_{maj}^{b1} \times F_{min}^{b1}$$

Where:
Nexpected is the number of expected collisions;
Fmaj is the entering AADT on the major approaches*;
Fmin is the entering AADT on the minor approaches *;
b0, b1, and b2 are the model parameters of the associated SPF

The SPF estimates the total annually expected collision frequency for the existing study area intersections and are summarized in **Table 8.**

Table 8: Total Annually Expected Collision Frequency - Existing Intersections

Intersection Name	Major AADT	Minor AADT	b_0	b_1	b_2	SPF Estimates (collisions/ year)
Malden Road & Orford Street	10,320	1,110	-8.73	0.3534	0.697	0.56
Malden Road & Sprucewood Avenue	10,250	4,360	-8.73	0.3534	0.697	1.45
Malden Road & Normandy Street	10,130	2,350	-8.73	0.3534	0.697	0.94
Malden Road & Bouffard Road (East)	7,660	600	-7.04	0.3158	0.697	1.27
Malden Road & Laurier Drive	6,370	3,610	-8.73	0.3534	0.487	0.19

The SPF was then combined with historical collision data from the study area intersections using a weighted Empirical-Bayes procedure. The following Highway Safety Manual equations were used for this purpose:

Equation 3: Empirical Bayes Method analysis - Smoothed number of expected collisions:

$$\boldsymbol{Nsmoothed = w \times Nexpected + (1 - w) \times Nobserved}$$

Equation 4: Empirical Bayes Method analysis - Weighted adjustment:

$$\boldsymbol{w = \frac{1}{1 + k \times N_{expected}}}$$

Where:
Nsmoothed is smoothed number of expected collisions;
Nexpected is the number of expected collisions;
Nobserved is observed number of collisions at the site;
w is weighted adjustment;
k is overdispersion parameter of the associated SPF.

This procedure overcomes some of the statistical weaknesses associated with collision analyses that arise from relatively small sample sizes and random short-term variability that is typical of collision occurrences and provides what is termed a “Smoothed SPF Estimate” of annual expected collision frequency. In other words, this procedure transforms the observed collision counts to an expected value based on the long run, without randomness of annual collision occurrence and provides what is termed a “Smoothed SPF Estimate” of annual expected collision frequency. The potential for safety improvements are then determined by comparing the smoothed collision estimates to the expected collision estimates, indicating if analysis location is experiencing more collisions than expected. These results are summarized in **Table 9**

Table 9: Empirical Bayes Method Analysis – Smoothed Expected Collision Frequency

Intersection Name	SPF Estimates (collisions/year)	Observed Collisions (collisions/year)	Smoothed SPF Estimates (collisions/year)
Malden Road & Oxford Street / Elmdale Avenue	0.56	3.00	1.90
Malden Road & Sprucewood Avenue	1.45	10.00	7.50
Malden Road & Normandy Street	0.94	8.00	5.30
Malden Road & Bouffard Road (East)	0.33	4.40	2.40
Malden Road & Laurier Drive / Laurier Parkway	1.08	2.80	2.20

The analysis results suggest that, when the smoothed annual collision frequencies are compared to the annual expected collision frequencies, all of the five intersections present higher than expected annual collision frequencies. This suggests these intersection locations function in a manner that leads to higher collision frequencies. Considering the predominant type of collision is ‘rear-end’ collisions, rather than turning movement collisions, there could be an issue with the signal timing and intersection spacing, particularly between Todd Lane and Normandy Street as the average intersection spacing is approximately 190m (as visualized in **Figure 19**) which is lower than the 400m that is typically recommended for High Capacity Arterial roadways.

A review of the existing intersection operations identified few movements at the five intersections as approaching capacity or operating with poor levels-of-service, however it should be noted that southbound through movement queues in the PM peak hour were analysed to reach up to between 90-112m for southbound through movements between Sprucewood Avenue and Normandy Street. This is likely a result of the increased collision rate since the existing intersection spacing is only about 190m as mentioned above.

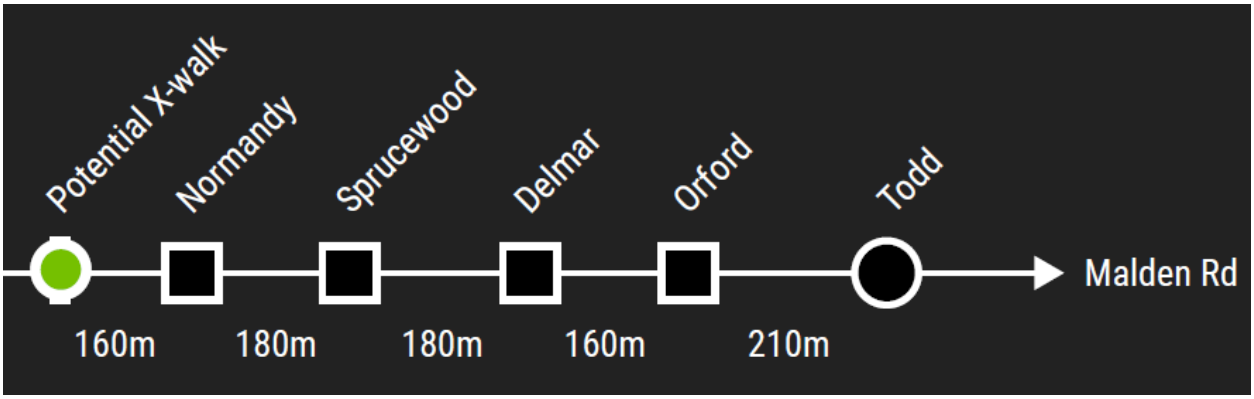


Figure 19: Existing Intersection Spacing | Todd Lane to Normandy Street

4.4 Geometric Review of Intersections

4.4.1 Sight Line Analysis

The sight distance requirement for the left turns was calculated following the *Transportation Association of Canada (TAC) - Geometric Design Guide for Canadian Roads (2017) (TAC Manual) - Figure 9.9.2: Departure Sight Triangles (Stop-Controlled).* For the left turning movement, the sight distance design should be based on a left turn by a stopped vehicle, since a vehicle that turns left without stopping would need less sight distance. The intersection sight distance (ISD) along the major road to accommodate left turns is the distance traversed at the design speed of the major road in the travel time for the design vehicle, as determined by the following equation:

Equation 5: Intersection Sight Distance (ISD) calculation:

$$ISD = 0.278 * V_{major} * t_g$$

Where:
ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)
Vmajor = design speed of major road (km/h)
tg = time gap.

The time gap (tg) adjustment for design vehicles and multilane highways is presented in **Table 10**.

Table 10: Time Gap Values by Design Vehicle

Design Vehicle	Time Gap (s) at Design Speed of Major Road (tg)
Passenger Car	5.5
Single-Unit Truck	6.5
Combination Truck	7.5

Source: Transport Association of Canada (TAC) Geometric Design Guide, 2018

Table 11 shows the sightline requirements for all minor approaches on Malden Road. Comparing the five intersections identified as having higher than expected annual collision frequencies in **Section 4.3**, it is observed that the Intersections of Malden Road at Bouffard Road (East), and at Laurier Drive/Laurier Parkway do not meet the intersection sight distance requirements, however few turning movement collisions were observed in the last five years indicating that the few intersections that do not meet ISD requirements present a minor concern.



Table 11: Sight Distance Requirement

Access	Direction	Required Distance	Available Distance	Requirement Met
Elmdale Ave	Left	104.25	135	Yes
	Right		105	Yes
Orford St	Left	104.25	155	Yes
	Right		135	Yes
Delmar St	Left	104.25	190	Yes
	Right		60	No
Malden Square Access	Left	104.25	150	Yes
	Right		45	No
Malden Square Access	Left	104.25	150	Yes
	Right		45	No
Malden village Access	Left	104.25	107	Yes
	Right		130	Yes
Sprucewood Ave	Left	104.25	150	Yes
	Right		108	Yes
Normandy St (East Leg)	Left	104.25	145	Yes
	Right		107	Yes
Normandy St (West Leg)	Left	104.25	155	Yes
	Right		125	Yes
Tuttle Ave	Left	104.25	105	Yes
	Right		45	No
Morton Drive	Left	104.25	190	Yes
	Right		108	Yes
Omira St	Left	104.25	68	No
	Right		160	Yes
Edgemore Ave	Left	104.25	160	Yes
	Right		85	No
Suzanne St	Left	104.25	163	Yes
	Right		120	Yes
Stuart Blvd	Left	104.25	95	No

Access	Direction	Required Distance	Available Distance	Requirement Met
	Right		72	No
Outram Ave	Left	104.25	200	Yes
	Right		80	No
Valiant St	Left	104.25	180	Yes
	Right		98	No
Monty St	Left	104.25	105	Yes
	Right		136	Yes
Reaume Rd	Left	104.25	90	No
	Right		180	Yes
Bouffard Rd(W)	Left	104.25	150	Yes
	Right		110	Yes
Bouffard Rd(E)	Left	104.25	165	Yes
	Right		20	No
Laurier Parkway	Left	104.25	133	Yes
	Right		25	No
Laurier Dr	Left	104.25	30	No
	Right		220	Yes
Mike Raymond Drive	Left	104.25	52	No
	Right		170	Yes

5.0 Future (2041) Traffic Conditions

5.1 Traffic Growth Rate

5.1.1 Transportation Master Plan Forecasts

The Town of LaSalle Transportation Master Plan (TMP) model was reviewed to compare existing roadway volumes with future forecasts to determine an annual growth for the 2041 horizon year. These volumes were derived through a travel demand model that was used to inform TMP analysis and are based on the TMP's recommended Alternative #3 and considers several factors including forecasted population, employment, mode shifts onto sustainable modes of transportation, and development growth in the Town. As a result, the existing traffic counts used for the existing conditions analysis were grown according to a calculated annual growth rate based on the difference between existing counts and TMP model forecasts. Since the calculated traffic growth rates indicated unstable rates (negative growth for a few approaches and unreasonably high growth for other approaches), they were adjusted as described below.

The annual growth rates for through movements at Todd Lane, Normandy Street, Reaume Road, Bouffard Road and Laurier Street, were estimated, using an annual growth rate derived from TMP projected volumes. Since the TMP volumes reflected the PM peak hour the growth rates for the AM peak hour were obtained by inverting the growth rates in the eastbound and westbound approaches. The calculated traffic growth rates for Oxford Street, Delmar Street, Edgemore Avenue, and other minor roads showed negative growth rates. Since most sub-divisions along these roads are fully developed and no further background growth is expected, a conservative traffic growth rate of 0.5% per annum was assumed for these roads and all other movements connecting to built-up residential areas. **Table 12** summarises the annual growth rates used for each street.

Table 12: TMP-Derived Annual Growth Rates

Intersection	NB/EB	SB/WB		Intersection	NB/EB	SB/WB
Malden Road	1.00%	1.00%		Monty Street	0.50%	0.50%
Todd Lane	0.50%	2.00%		Reaume Road	3.00%	3.00%
Orford Street / Elmdale Avenue	0.50%	0.50%		Bouffard Road (West)	3.00%	3.00%
Delmar Street	0.50%	0.50%		Bouffard Road (East)	0.50%	0.50%
Sprucewood Avenue	0.50%	0.50%		Laurier Drive / Laurier Parkway	3.00%	16.00%
Normandy Street	3.00%	3.00%		Mike Raymond Drive	0.50%	0.50%
Edgemore Avenue	0.50%	0.50%		All other Movements	0.50%	0.50%
Stuart Boulevard	0.50%	0.50%		Monty Street	0.50%	0.50%

One of the main tenets of the Town's Transportation Master Plan (TMP) is to relieve traffic on Front Street, Matchette Road, and Malden Road and shift the flows to other North-South corridors in the east via Laurier Street and other east-west corridors. Hence the modeled future volumes on Malden Road showed a decreasing trend in some sections and minimal change in others.

5.1.2 County Forecasts

Subsequent to evaluating the future TMP forecasts, discussions were held between the Town of LaSalle and the County of Essex where it was expressed that road improvements typically bring induced demand along a corridor and that from a County perspective, Malden Road represents an important regional corridor. As a conservative measure the County of Essex recommended applying a blanket growth rate of 2% to all movements within the study area.

As such, for future analysis, a 2% annual growth rate was evaluated. It is important to note that this growth rate is conservative in the sense that it does not account for mode share shifts or other mitigating measures, proposed through the Town of LaSalle's TMP, that would lower the rate at which future vehicular volumes would grow. It is to be considered a worst-case evaluation of future roadway needs along the corridor.

5.2 Volume Distribution Sensitivity Analysis

Through discussions with the Town of LaSalle and the County of Essex concerns were raised in relation to the volume distribution impacts and constraints associated with the future planned extensions of Reaume Road, Diotte Street, and Whitlock Street.

Whitlock Street is a planned local street with minimal network connections. As such it was assumed that it would have negligible impacts on traffic distribution. To determine the isolated distribution impacts of the Reaume Road and Diotte Street extensions, a screenline evaluation was completed to compare the current "Do Nothing" volume distribution with the modelled TMP Alternative #3 distribution that included the roadway extensions. The purpose of this analysis was to determine the proportion of future trips that are anticipated to be re-distributed away from Malden Road towards the extensions.

The TMP analysis showed that the construction of the Reaume Road and Diotte Street extensions along with other recommended strategies will shift a considerable amount of the north-south volumes from Malden Road, Front Street, and Matchette Road to east-west corridors. A reduction of 17% northbound volumes and 35% southbound volumes were observed at the screenline during the PM peak hour.

As a conservative measure, a sensitivity analysis was done to compare a reduction of 10% northbound and 20% southbound volumes, as well as 15% northbound and 30% southbound reductions that are more in-line with the TMP forecasts. Along Malden Road these reductions are specifically associated with the extension of Reaume Road and the extension of Diotte Street. The distribution impacts of these extensions were evaluated for the following scenarios:

1. 2041 'Do Nothing' 2% growth.
2. 2041 2% growth with Reaume Road extension only (10% and 20% reduction).
3. 2041 2% growth with Diotte Street extension only (10% and 20% reduction).
4. 2041 2% growth with Reaume Road and Diotte Street extensions (10% and 20% reduction).
5. 2041 2% growth with Reaume Road and Diotte Street extensions (15% and 30% reduction).

For the conservative scenarios with 10% and 20% total trip reductions, it was assumed that Reaume Road and Diotte Street will each divert one-third of the trip reduction away from Malden Road. This results in a 3.3% and a 6.6% reduction in the northbound and southbound directions, respectively as summarized in **Table 13**. The scenario with 15% and 30% trip reductions assumes that the extensions of Reaume Road and Diotte Street together will reduce trips on Malden Road by 15% in the northbound direction and 30% in the southbound direction.



Table 13: Trip reduction away from Malden Road in each volume sensitivity scenario | PM Peak Hr

Scenario	Northbound Reduction	Southbound Reduction
1. 2041 Do Nothing 2% growth	N/A	N/A
2. 2041 2% growth with Reaume Road extension only (10% and 20% reduction)	3.3%	6.6%
3. 2041 2% growth with Diotte Street extension only (10% and 20% reduction)	3.3%	6.6%
4. 2041 2% growth with Reaume Road and Diotte Street extensions (10% and 20% reduction)	6.6%	13.2%
5. 2041 2% growth with Reaume Road and Diotte Street extensions (15% and 30% reduction)	15%	30%
Note: These reductions represent PM Peak Hour reductions. For AM Peak Hour reductions the values would be inverted (i.e. PM northbound reduction value would be applied to southbound and vice-versa)		

In isolation, the Reaume Road extension (scenario two) will carry approximately 20% of inbound and outbound trips in both AM and PM peak hours by providing an east-west alternative to trips typically traveling north-south on Malden Road. The Diotte Street extension (scenario three) diverts north-south trips away from Malden Road by providing a parallel north-south road. The combination of the two extensions with 15% reduction in northbound trips and 30% reduction in southbound trips (scenario five) results in Reaume Road carrying the greatest share of inbound and outbound trips in the AM and PM peaks.

The following figures display volume capacity plots for each scenario in the AM and PM periods. As shown in **Figure 20**, the 'Do Nothing' scenario with 2% growth (scenario one) will result in operations at or over capacity along the south portion of Malden Road, particularly the segment from Normandy Street to Laurier Drive during the PM Peak. Without the extensions of Reaume Road and Diotte Street, it will be difficult for Malden Road to accommodate the 2% growth scenario. However, this scenario is unlikely to

come to fruition because the forecasted growth on Malden Road will only occur once development occurs, and Reaume Road and Diotte Street extensions are required to support this development growth. The Town of LaSalle has expressed the need for these extensions through the LaSalle TMP to provide a connected street network and construction is expected to proceed when development occurs, such as construction or construction approvals.

Roadway capacity analyses for scenarios two to five show the incremental improvements in capacity incurred by the addition of either or both links. The addition of either Reaume Road (scenario two) or Diotte Road (scenario three) results in fewer instances of over-capacity operations. Using the conservative estimates of trip reductions caused by the inclusion of both extensions (scenario four), Malden Road will have no segments operating at or over capacity during the AM peak hour and will have improvements in PM peak hour capacity as well. Assuming that Reaume Road and Diotte Road will have greater trip diversion from Malden Road (scenario five), nearly all of Malden Road will operate well within capacity during the AM peak hour and very few segments at or exceeding capacity remain in the PM peak hour (**Figure 24**). This illustrates that the Reaume Road and Diotte Street extensions will be responsible for significant capacity improvements, which will be even further improved by the solutions explored in the next section.

Through consultation with the Town of LaSalle and the County of Essex it was determined that the future extensions of Reaume Road and Diotte Street would be required to accommodate future growth within the community since they would serve developable lands along with recommendations made within the TMP. As a result, the application of a 2% per annum growth rate along with the distribution reductions of 15% and 30% for the northbound and southbound, respectively for the PM, and the inverse for the AM was selected for future traffic analysis. The distributions and volumes are presented below in **Table 14** (AM peak) and **Table 15** (PM peak). Scenario five is the selected distribution scenario carried forward for further evaluation.

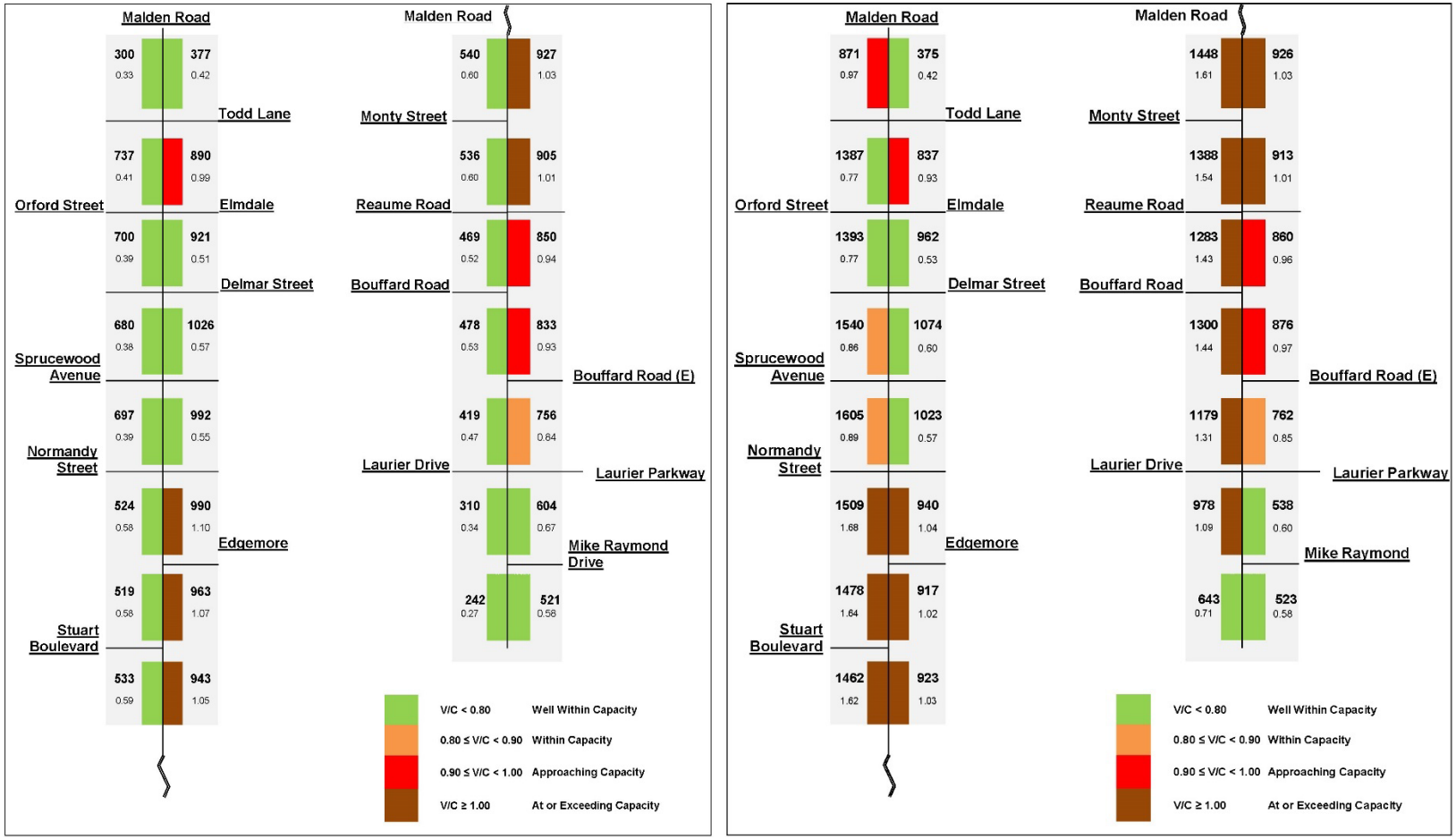


Figure 20: Roadway Capacity (V/C) Analysis for Scenario 1: 2041 'Do Nothing' 2% growth | AM peak hour (left) and PM peak hour (right)

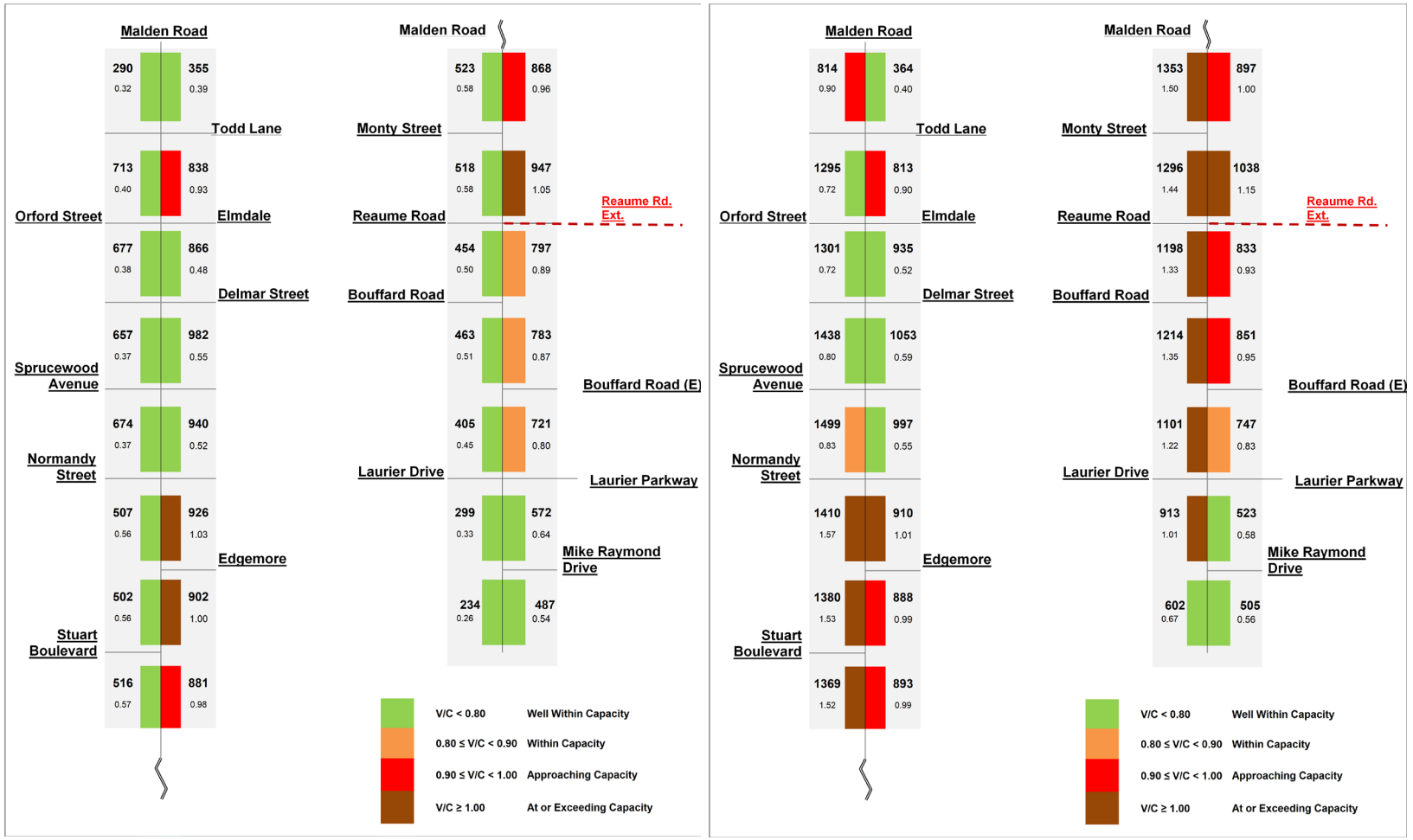


Figure 21: Roadway Capacity (V/C) Analysis for Scenario 2: With Reaume Road extension only (10% and 20% reduction) | AM peak hour (left) and PM peak hour (right)

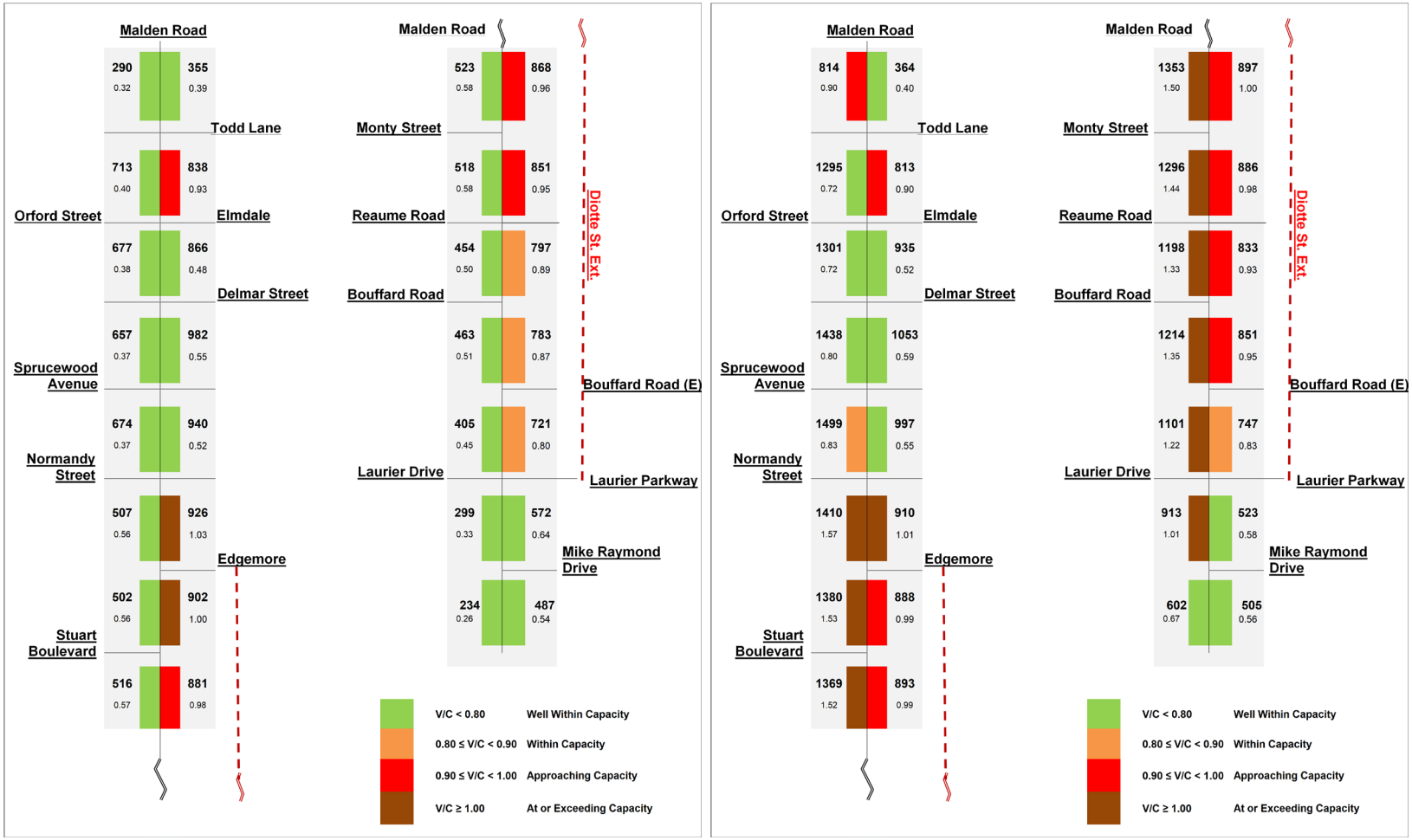


Figure 22: Roadway Capacity (V/C) Analysis for Scenario 3: With Diotte Street extension only (10% and 20% reduction) | AM peak hour (left) and PM peak hour (right)

Future (2041) Traffic Conditions
October 15, 2021

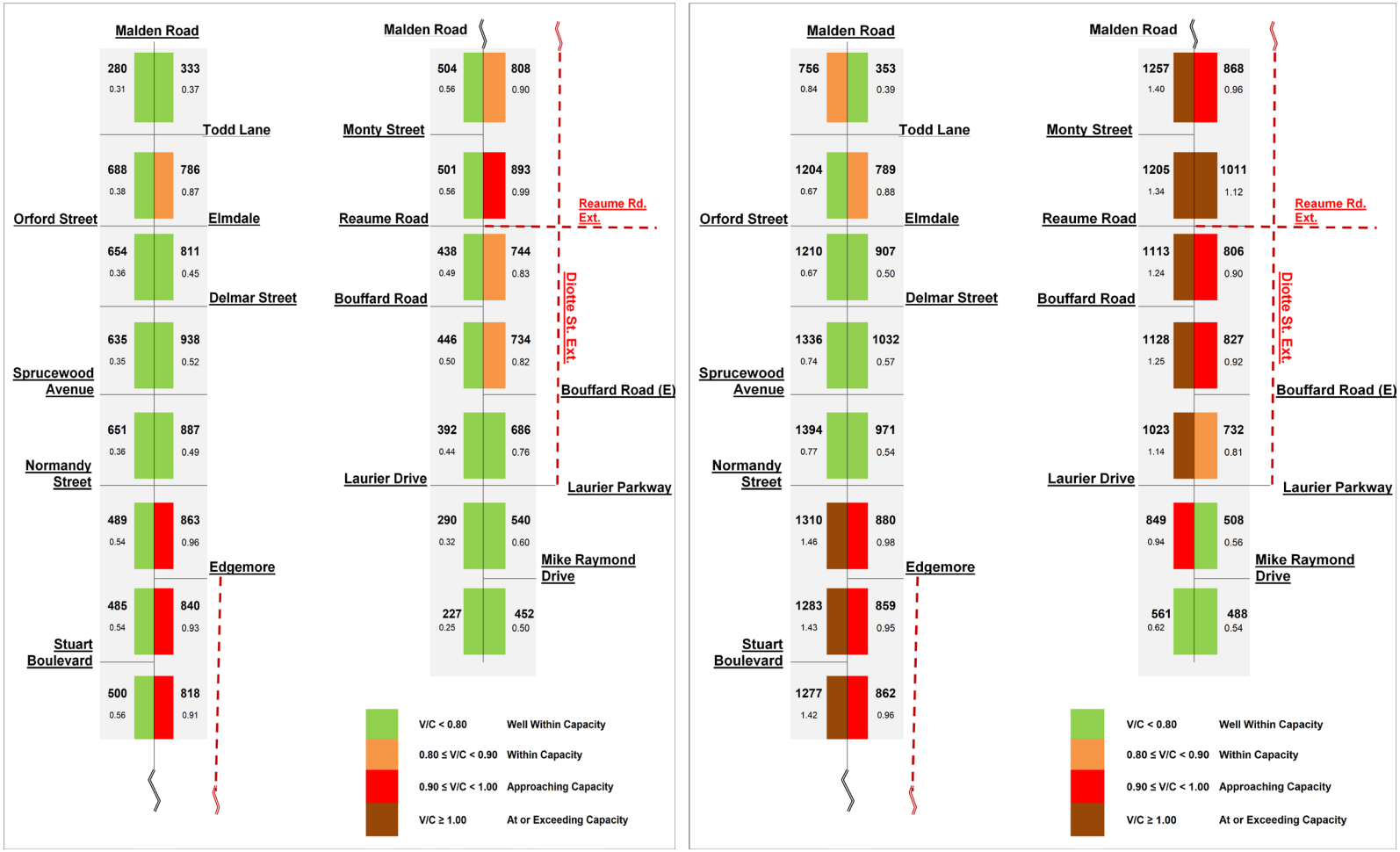


Figure 23: Roadway Capacity (V/C) Analysis for Scenario 4: With Reaume Road and Diotte Street extensions (10% and 20% reduction) | AM peak hour (left) and PM peak hour (right)

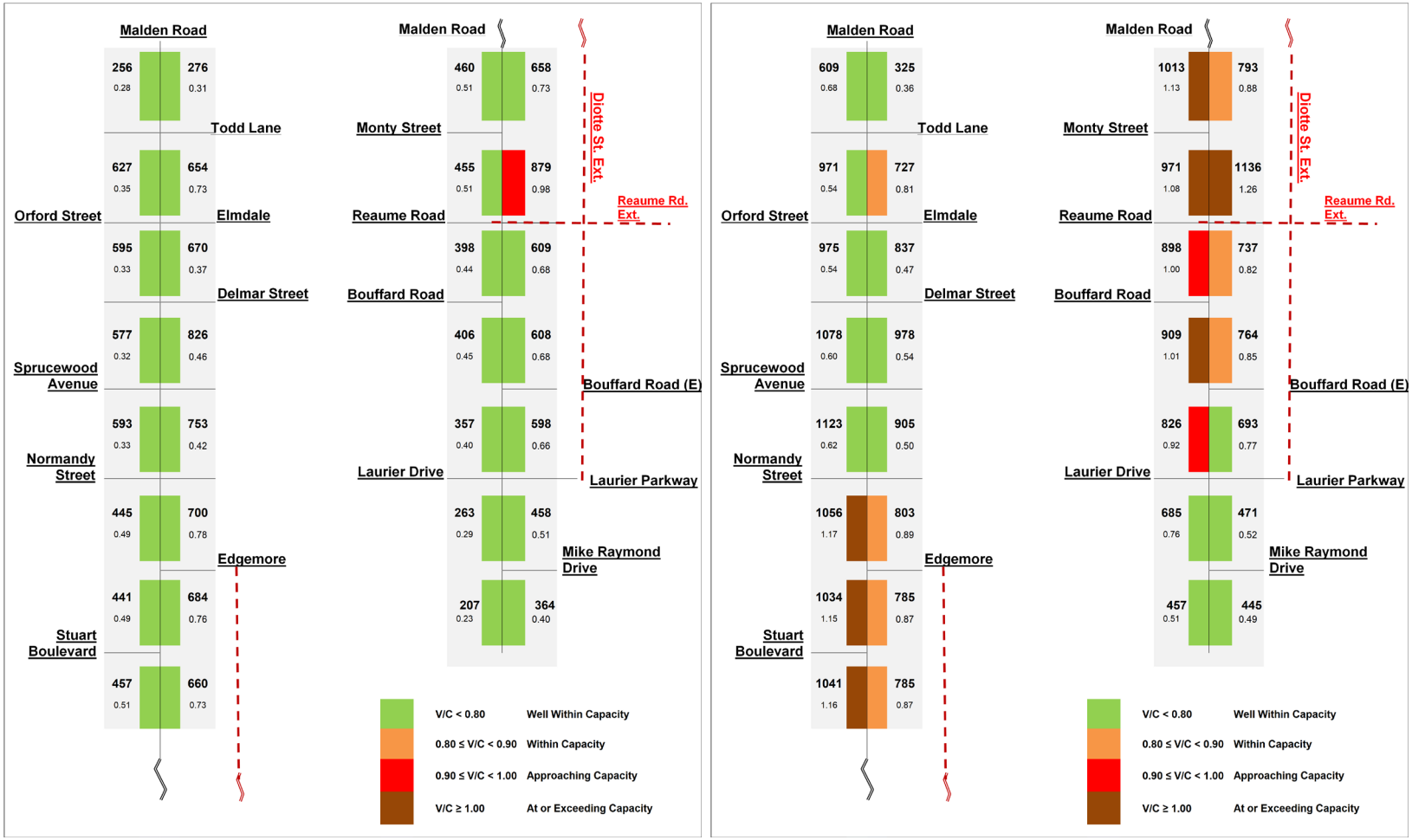


Figure 24: Roadway Capacity (V/C) Analysis for Scenario 5: With Reaume Road and Diotte Street Extensions (15% and 30% reduction) | AM peak hour (left) and PM peak hour (right)

Table 14: Trip distribution percent (volume) for distribution sensitivity analysis | AM Peak hour

	6. 1. 2041 'Do Nothing' 2% Growth		7. 2. With Reaume Road Extension Only (10% and 20% reduction)		8. 2. With Diotte Street Extension Only (10% and 20% reduction)		9. 4. With Reaume Road and Diotte Street Extensions (10% and 20% reduction)		10. 5. With Reaume Road and Diotte Street Extensions (15% and 30% reduction)	
AM PEAK Hour	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malden Road (N)	8% (300)	10% (377)	6% (290)	8% (355)	7% (290)	10% (355)	6% (280)	8% (333)	5% (256)	6% (276)
Todd Lane	10% (410)	14% (526)	9% (410)	11% (492)	10% (410)	13% (492)	9% (410)	11% (460)	8% (410)	8% (375)
Orford Street / Elmdale Avenue	5% (179)	6% (238)	4% (179)	5% (226)	5% (179)	6% (226)	4% (179)	5% (212)	3% (179)	4% (183)
Delmar Street	6% (236)	11% (412)	5% (236)	9% (392)	6% (236)	11% (392)	5% (236)	9% (372)	4% (236)	7% (322)
Sprucewood Avenue	18% (705)	17% (639)	15% (705)	14% (611)	18% (705)	17% (611)	16% (705)	14% (584)	13% (705)	11% (512)
Normandy Street	10% (381)	10% (383)	8% (381)	8% (368)	10% (381)	10% (368)	8% (381)	8% (351)	7% (381)	7% (312)
Edgemore Avenue	1% (34)	1% (20)	1% (34)	0% (20)	1% (34)	0% (20)	1% (34)	0% (18)	1% (34)	0% (16)
Stuart Boulevard	2% (63)	1% (29)	1% (63)	1% (28)	2% (63)	1% (28)	1% (63)	1% (26)	1% (63)	0% (23)
Monty Street	1% (49)	0% (19)	1% (49)	0% (18)	1% (49)	0% (18)	1% (49)	0% (17)	1% (49)	0% (15)
Reaume Road	4% (153)	3% (130)	20% (955)	21% (955)	4% (153)	3% (124)	17% (766)	18% (766)	33% (1807)	37% (1741)
Bouffard Road (W)	2% (96)	2% (71)	2% (96)	2% (68)	2% (96)	2% (68)	2% (96)	2% (64)	2% (96)	1% (55)
Bouffard Road (E)	2% (95)	2% (79)	2% (95)	2% (76)	2% (95)	2% (76)	2% (95)	2% (73)	2% (95)	1% (66)
Laurier Drive/Pkwy	16% (620)	15% (579)	13% (620)	13% (568)	16% (620)	15% (568)	14% (620)	13% (557)	11% (620)	11% (527)
Mike Raymond Drive	3% (128)	3% (113)	3% (128)	2% (108)	3% (128)	3% (108)	3% (128)	2% (103)	2% (128)	2% (90)
Malden Road (S)	13% (521)	6% (242)	10% (487)	5% (234)	12% (487)	6% (234)	10% (452)	5% (227)	7% (364)	4% (207)
Total	100% (3970)	100% (3857)	100% (4728)	100% (4519)	100% (3926)	100% (3688)	100% (4494)	100% (4163)	100% (5423)	100% (4720)

Table 15: Trip distribution percent (volume) for distribution sensitivity analysis | PM Peak Hour

	11.1. 2041 'Do Nothing' 2% Growth		12.2. With Reaume Road Extension Only (10% and 20% reduction)		13.2. With Diotte Street Extension Only (10% and 20% reduction)		14.4. With Reaume Road and Diotte Street Extensions (10% and 20% reduction)		15.5. With Reaume Road and Diotte Street Extensions (15% and 30% reduction)	
PM PEAK Hour	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malden Road (N)	13% (871)	6% (375)	10% (814)	5% (364)	13% (814)	6% (364)	10% (756)	5% (353)	7% (609)	4% (325)
Todd Lane	9% (601)	9% (590)	8% (601)	8% (569)	9% (601)	9% (569)	8% (601)	8% (547)	7% (601)	6% (492)
Orford Street / Elmdale Avenue	5% (338)	7% (442)	4% (338)	6% (422)	5% (338)	7% (422)	5% (338)	6% (401)	4% (338)	4% (349)
Delmar Street	10% (662)	11% (712)	9% (662)	9% (683)	10% (662)	11% (683)	9% (662)	10% (656)	7% (662)	7% (582)
Sprucewood Avenue	19% (1244)	17% (1134)	16% (1244)	15% (1090)	19% (1244)	18% (1090)	17% (1244)	15% (1046)	14% (1244)	12% (934)
Normandy Street	10% (638)	8% (511)	8% (638)	7% (487)	10% (638)	8% (487)	9% (638)	7% (465)	7% (638)	5% (404)
Edgemore Avenue	1% (38)	1% (51)	0% (38)	1% (49)	1% (38)	1% (49)	1% (38)	1% (45)	0% (38)	0% (38)
Stuart Boulevard	1% (94)	2% (116)	1% (94)	1% (110)	1% (94)	2% (110)	1% (94)	1% (103)	1% (94)	1% (87)
Monty Street	1% (57)	1% (76)	1% (57)	1% (72)	1% (57)	1% (72)	1% (57)	1% (67)	1% (57)	1% (57)
Reaume Road	3% (188)	4% (274)	19% (1500)	20% (1500)	3% (188)	4% (258)	16% (1200)	17% (1200)	34% (3163)	38% (3072)
Bouffard Road (W)	2% (124)	2% (119)	2% (124)	2% (113)	2% (124)	2% (113)	2% (124)	2% (107)	1% (124)	1% (92)
Bouffard Road (E)	2% (136)	2% (139)	2% (136)	2% (131)	2% (136)	2% (131)	2% (136)	2% (121)	1% (136)	1% (99)
Laurier Drive/Pkwy	14% (907)	14% (879)	12% (907)	11% (849)	14% (907)	14% (849)	12% (907)	12% (817)	10% (907)	9% (739)
Mike Raymond Drive	2% (113)	7% (433)	1% (113)	5% (406)	2% (113)	7% (406)	2% (113)	6% (381)	1% (113)	4% (315)
Malden Road (S)	8% (523)	10% (643)	6% (505)	8% (602)	8% (505)	9% (602)	7% (488)	8% (561)	5% (445)	5% (457)
Total	100% (6534)	100% (6494)	100% (7771)	100% (7447)	100% (6459)	100% (6205)	100% (7396)	100% (6870)	100% (9169)	100% (8042)

5.3 Future Roadway Alternatives

As part of the Class EA Addendum process, a series of alternatives were evaluated to identify future constraints and identify future opportunities. The following sections evaluate roadway operations through the following scenarios:

- Do Nothing Alternative
  - Assumes no improvements to the corridor or the surrounding road network;

- Network Extensions
  - Assumes the planned extension of Reaume Road east to Huron Church Road and the extension of Ellis Street south to Diotte Street are made to the corridor through to 2041;

- Previously Planned Improvements Alternative
  - Assesses the Network Extensions with previously recommended improvements from the 2009 Malden Road EA;

- Improved Alternative with Three-Lane Cross-Section
  - Scenario with improvements and solutions based on constraints identified in the previously planned improvements alternative scenario. This includes one lane in each direction with a two-way centre turning lane south of Normandy Street to the southern extent of the study area with intersection improvements. This scenario also includes the planned extensions of Reaume Road and Diotte Street. This includes on-street bike facilities which are able to fit within the right-of-way due to the 3-lane cross-section.

- Improved Alternative with Four-Lane Cross-Section
  - Scenario with improvements and solutions based on constraints identified in the previously planned improvements alternative scenario. This includes two lanes in each direction between Normandy Street and the southern extent of the study area with intersection improvements. This scenario also includes the planned extensions of Reaume Road and Diotte Street. On-street bike lanes are unable to be accommodated within the right-of-way, a shared multi-use path would be provided on the east side of the road.

The following pages describe the alternative scenarios, the assessment and evaluation criteria used, and the results of the comparative evaluation of roadway alternatives.

5.3.1 Do Nothing Alternative

This alternative assumes that Malden Road is maintained in its present configuration with no roadway improvements. Future traffic in this scenario is based on an estimate of 2% growth in both northbound and southbound directions on Malden Road. The Do Nothing road network, which is the same as the existing network, is shown in **Figure 25**.

Roadway Operations:

The future 2041 AM and PM peak hour volumes are shown below in **Figure 26** and **Figure 27**. Intersection operations at signalized and unsignalized intersections were evaluated with the same methodology used for the existing conditions and are summarised in **Table 16**. With no corridor improvements, this alternative is anticipated to experience operational constraints along Malden Road that do not exist today. Particularly during the PM peak hour, left-hand turn volumes onto Malden Road are constrained at signalized (Delmar Street, Sprucewood Avenue) and unsignalized (Edgemore Avenue, Stuart Boulevard, Monty Street, and Reaume Road) intersections.

The ‘Do Nothing’ alternative will see constraints on minor east-west streets such as Stuart Boulevard and Monty Street that see delays of nearly 600 seconds (~10 minutes) and queues up to 73m and 50m, respectively, in the PM peak. Todd Lane is anticipated to be constrained in the PM peak, with LOS ‘F’ observed at the intersection level and southbound queues of up to 60m. These results indicate a need for roadway and/or intersection enhancements to improve operations along the corridor.



Figure 25: Future 2041 'Do Nothing' Road Network

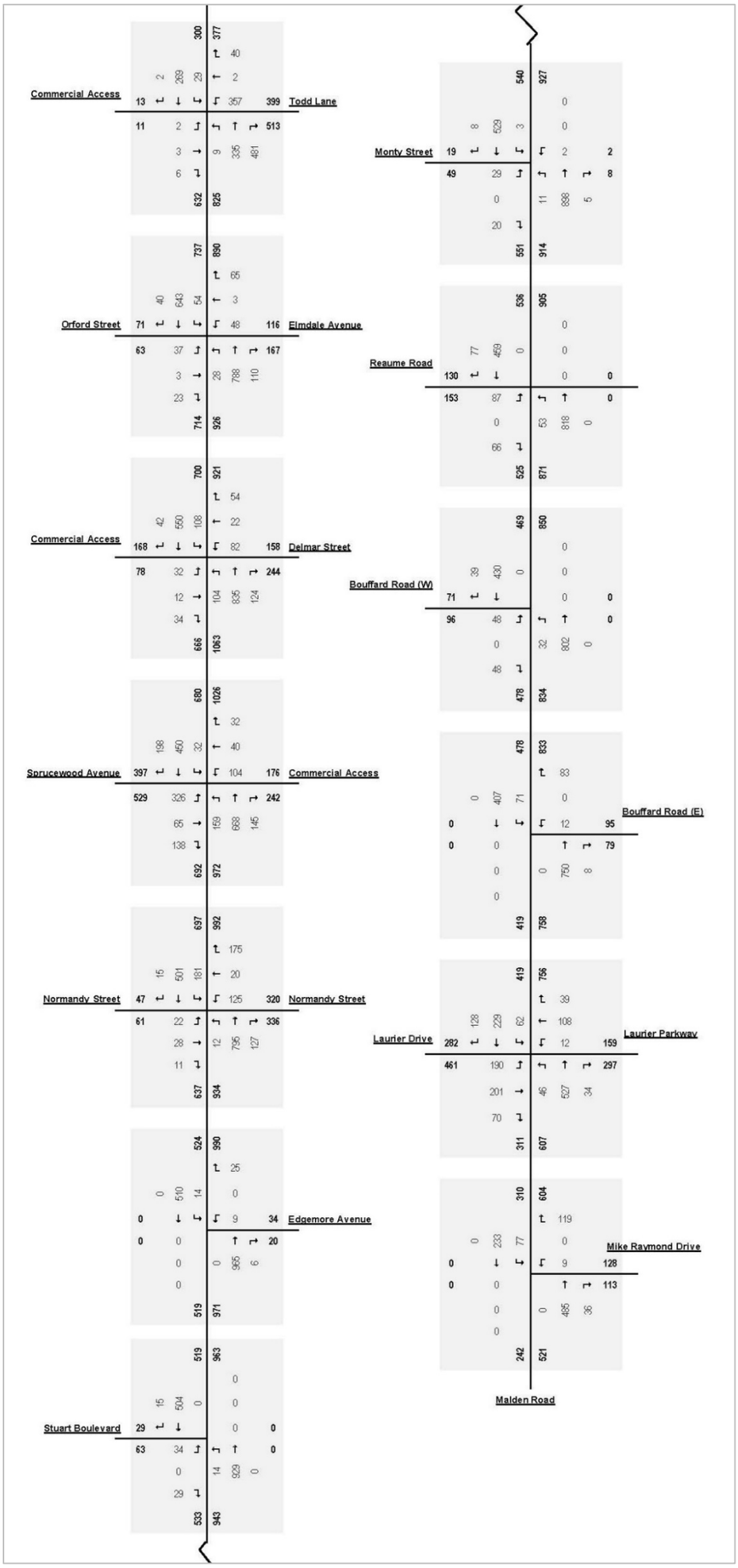


Figure 26: Future: (2041) Do Nothing Alternative- AM Peak Hour Trips

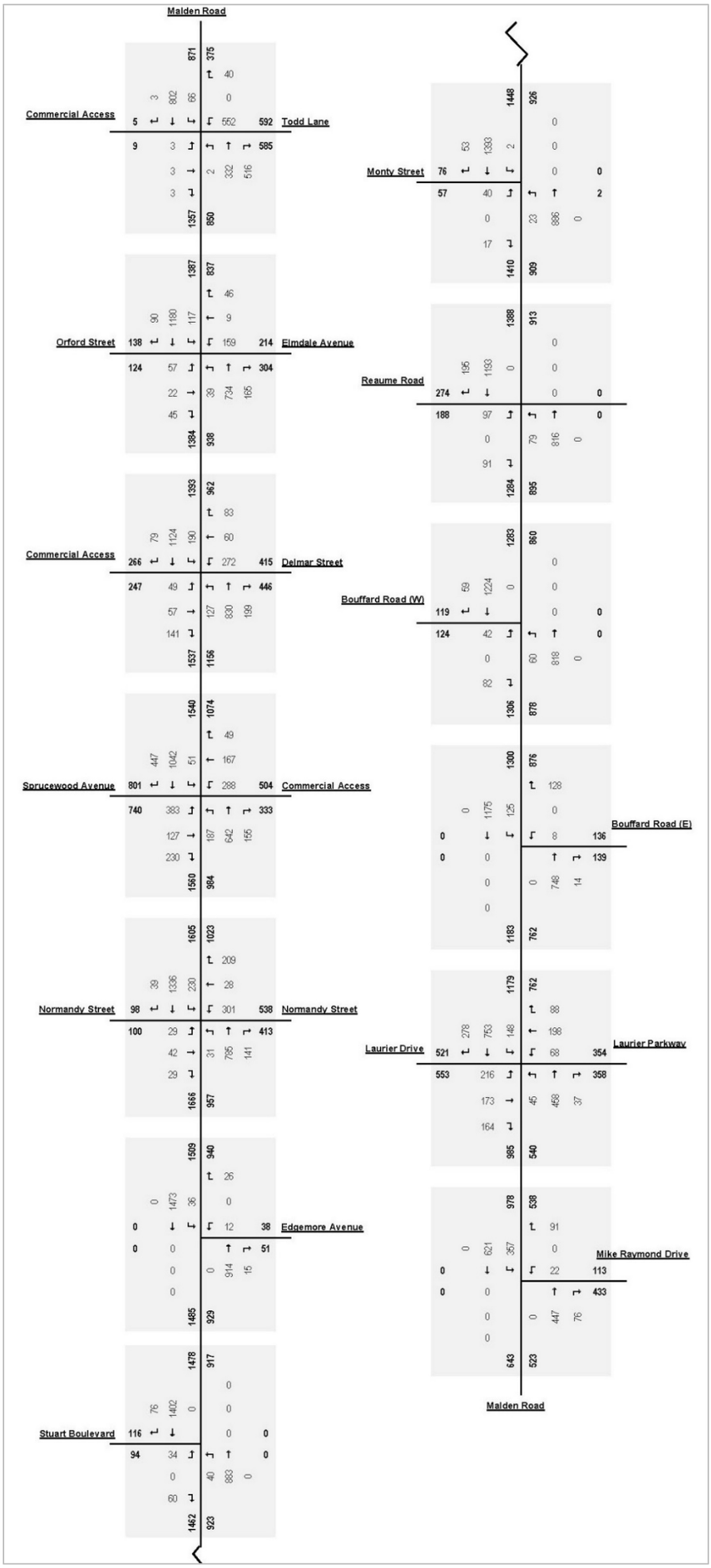


Figure 27: Future: (2041) Do Nothing Alternative- PM Peak Hour Trips

Table 16: Future 2041 Do Nothing Alternative | Intersection Level-of-Service Analysis | Peak Hour

Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q (m)	LOS	Delay	v/c	Q (m)	
Malden Road & Todd Lane *(Roundabout)*	EB	C	23	0.7	2.7	F	143	1.03	26	-
	WB	C	17	0.57	1.5	F	2432	1.87	394	-
	NB	A	8	0.03	0	B	12	0.03	0	-
	SB	F	512	1.23	104	F	632	1.28	131	-
Malden Road & Orford Street/Elmdale Avenue *(Signalized)*	EBL	C	20	0.12	11	C	22	0.17	17	30
	EBT	B	19	0.02	6	C	20	0.08	12	-
	WBL	C	20	0.13	14	C	27	0.44	42	12
	WBT	B	20	0.06	9	C	20	0.06	9	-
	NBL	A	3	0.08	1	B	10	0.32	2	66
	NBT	C	24	0.95	194	B	17	0.88	169	-
	NBR	A	1	0.09	0	A	2	0.12	0	-
	SBL	C	23	0.46	18	D	36	0.71	43	88
	SBT	B	11	0.43	42	B	18	0.75	96	-
	Intersection	***B***	***17***	***0.65***	***-***	***B***	***18***	***0.72***	***-***	***-***
Malden Road & Delmar Street *(Signalized)*	EBL	C	21	0.09	11	C	27	0.20	17	20
	EBT	C	21	0.05	10	C	29	0.31	30	-
	WBL	C	24	0.27	24	F	199	1.31	111	45
	WBT	C	21	0.09	13	C	27	0.24	26	-
	NBL	A	7	0.29	3	D	37	0.71	15	23
	NBT	B	20	0.81	89	B	18	0.73	71	-
	SBL	C	30	0.46	19	C	34	0.73	27	23
	SBT	B	14	0.50	25	B	16	0.85	51	-
	Intersection	***B***	***18***	***0.57***	***-***	***D***	***35***	***0.98***	***-***	***-***
Malden Road & Sprucewood Avenue *(Signalized)*	EBL	D	39	0.82	75	F	101	1.09	122	105
	EBT	C	27	0.33	30	D	52	0.84	91	-
	WBL	C	22	0.33	21	F	220	1.37	94	55
	WBT	C	24	0.10	13	C	31	0.41	42	-
	WBR	C	23	0.02	0	C	25	0.03	0	50
	NBL	C	33	0.65	19	F	86	1.00	41	21
	NBT	C	33	0.84	50	D	37	0.70	90	-

	SBL	B	14	0.15	6	C	23	0.19	8	21
	SBT	C	30	0.70	71	F	219	1.39	200	-
	Intersection	***C***	***32***	***0.81***	***-***	***F***	***132***	***1.34***	***-***	***-***
Malden Road & Normandy Street *(Signalized)*	EBL	B	14	0.06	6	B	16	0.09	8	30
	EBT	B	14	0.05	9	B	17	0.09	13	-
	WBL	C	23	0.38	35	D	43	0.80	104	33
	WBT	B	20	0.18	17	C	23	0.21	22	-
	NBL	B	16	0.05	4	C	20	0.17	7	24
	NBT	F	102	1.13	121	D	38	0.89	95	-
	SBL	F	88	0.98	47	E	75	1.10	11	22
	SBT	C	23	0.66	42	F	174	1.33	97	-
	Intersection	***C***	***32***	***0.81***	***-***	***F***	***132***	***1.34***	***-***	***-***
Malden Road & Laurier Drive/ Laurier Parkway (Signalized)	EBL	C	23	0.52	40	C	24	0.55	43	50
	EBT	C	34	0.70	76	D	43	0.79	90	-
	WBL	C	30	0.08	5	C	24	0.25	16	46
	WBT	D	35	0.52	32	C	33	0.51	53	-
	WBR	C	31	0.03	0	C	28	0.07	6	46
	NBL	B	14	0.11	12	C	25	0.35	11	45
	NBT	D	41	0.89	204	D	47	0.89	165	-
	SBL	B	16	0.31	15	C	21	0.57	30	81
	SBT	B	18	0.35	61	F	127	1.18	277	-
	SBR	B	16	0.10	10	C	23	0.34	43	46
	Intersection	***C***	***30***	***0.78***	***-***	***E***	***61***	***0.98***	***-***	***-***
Malden Road & Edgemore Avenue *(Un-Signalized)*	WBLR	D	32	0.22	6	F	122	0.61	20	-
	SBL	B	11	0.03	1	B	10	0.05	1	-
Malden Road & Stuart Boulevard *(Un-Signalized)*	EBLR	E	45	0.45	16	F	580	1.87	73	-
	NBL	A	1	0.02	0	A	5	0.12	3	-
Malden Road & Monty Street *(Un-Signalized)*	EBLR	E	39	0.34	11	F	590	1.72	50	-
	NBL	A	0	0.01	0	A	3	0.07	2	-
Malden Road & Reaume Road *(Un-Signalized)*	EBLR	F	233	1.27	79	F	Err	5.79	Err	-
	WBLR									-

	NBL	A	2	0.06	2	A	6	0.18	5	-
	SBL									-
Malden Road & Bouffard Road (West) *(Un-Signalized)*	EBLR	A	1	0.03	1	A	4	0.13	3	-
	NBL	D	35	0.47	18	F	123	0.95	52	-
Malden Road & Bouffard Road (East) *(Un-Signalized)*	WBLR	A	3	0.12	3	A	7	0.18	5	-
	SBL	B	13	0.02	1	F	58	0.26	7	-
Malden Road & Mike Raymond Drive *(Un-Signalized)*	WBL	B	14	0.24	7	B	13	0.18	5	-
	WBR	A	9	0.08	2	B	11	0.40	15	-
	SBL									-
*Err indicates exceptionally High Delays and Queue length										

5.3.2 Network Extensions

This alternative assumes that Malden Road is maintained in its present configuration with no roadway improvements. As the land east of Reaume Road is scheduled to be developed and connected to Malden Road, the intersection of Malden Road and Reaume Road was assessed with a 4th leg (westbound approach), additionally it was also assumed that to accommodate these new development lands Ellis Street would be extended south to connect to Diotte Street shifting some traffic away from Malden Road (see scenario five in **Section 5.2**). The assumed 'Network Extensions' road network is visualized in **Figure 28**.

Roadway Operations:

Figure 29 and **Figure 30** show the future 2041 AM and PM peak hour volumes. Intersection operational analysis is summarised in **Table 17**. Generally, the 'Network Extensions' conditions will present a few issues on the network including deteriorated operations on east-west minor roads due to increased traffic volumes along Malden Road, despite some volume being re-distributed onto the extension corridors. The increased volume presents a barrier for vehicles looking to make left turns onto Malden Road or east-west through movements across the corridor. This is worsened by the two-lane configuration where high volumes of traffic from the four-lane section north of Normandy Street are concentrated on fewer lanes reducing the available gap distance for side-street vehicles to pass through.

South of Normandy Street, the Reaume Road extension to service new residential subdivisions east of Malden Road, and the associated connection to the existing unsignalized intersection at Reaume Road and Malden Road, will experience poor operations reflected through significant delays at the east and west approaches reaching exceptionally high delays and queue lengths resulting in a LOS 'F'. However, compared to the "Do Nothing" scenario, the introduction of the roadway extensions of Reaume Road and Diotte Street improve the 'LOS' of many movements due to the redistribution of north-south trips to this new east-west connection.

Active Transportation Operation Considerations:

Maintaining the existing active transportation network does not further encourage active transportation usage. As identified in **Section 2.6** of this report, the existing network is characterized by a disconnected and discontinuous network of pedestrian and cycling facilities along Malden Road. It also forces cyclists to shift from an in-boulevard pathway to an on-road shared roadway facility in the vicinity of the Cahill Drain. This presents



little protection for cyclists as they would be required to bike in high-volume conditions, particularly during the PM peak hour by 2041. This would also have negative impacts on roadway operations whereby on-road cyclists, which typically travel at speeds between 10-20 km/h would force motorists to weave in and out of the adjacent lane to pass. This would be an intimidating environment for novice cyclists who are not already comfortable with travelling in traffic.

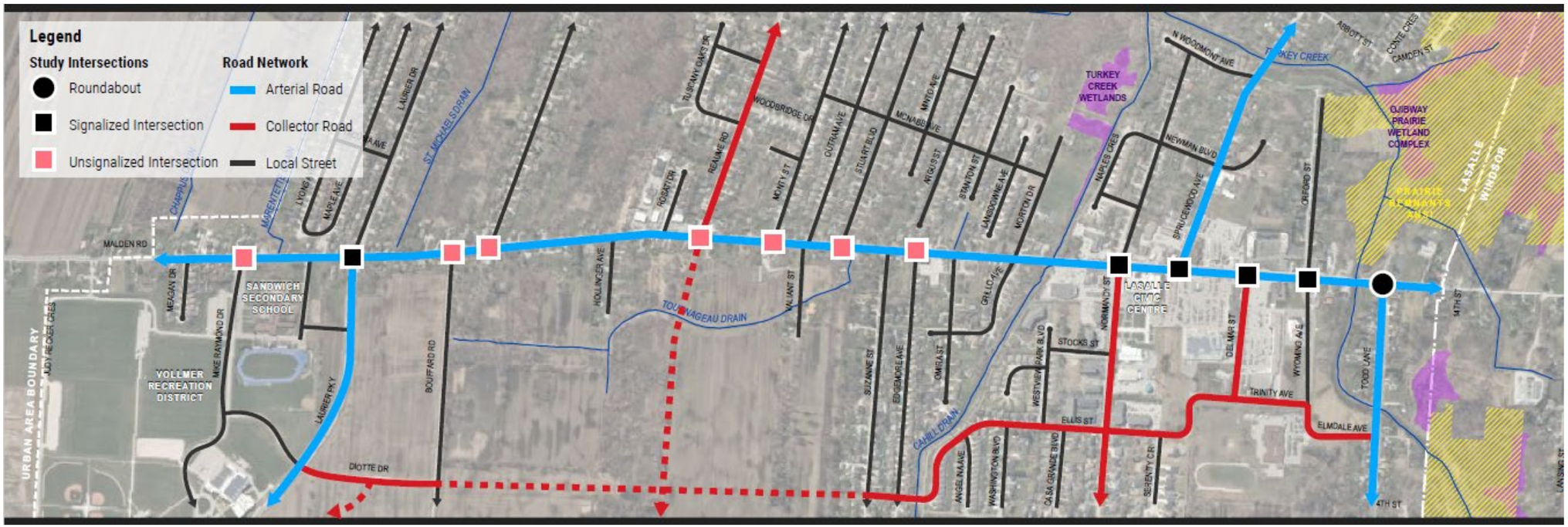


Figure 28: Future 2041 'Network Extensions' Road Network

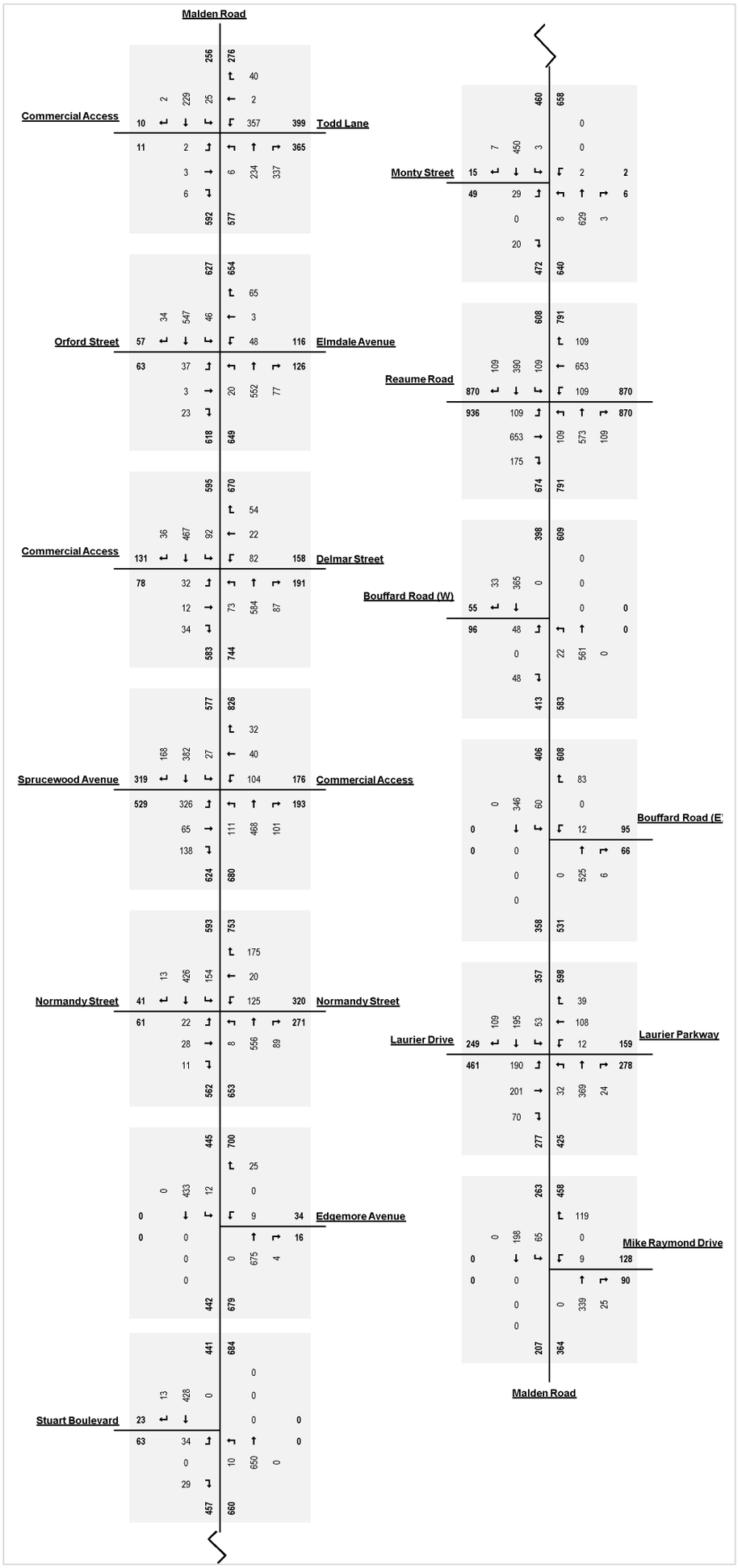


Figure 29: Future: (2041) Extensions Network Alternative- AM Peak Hour Trips

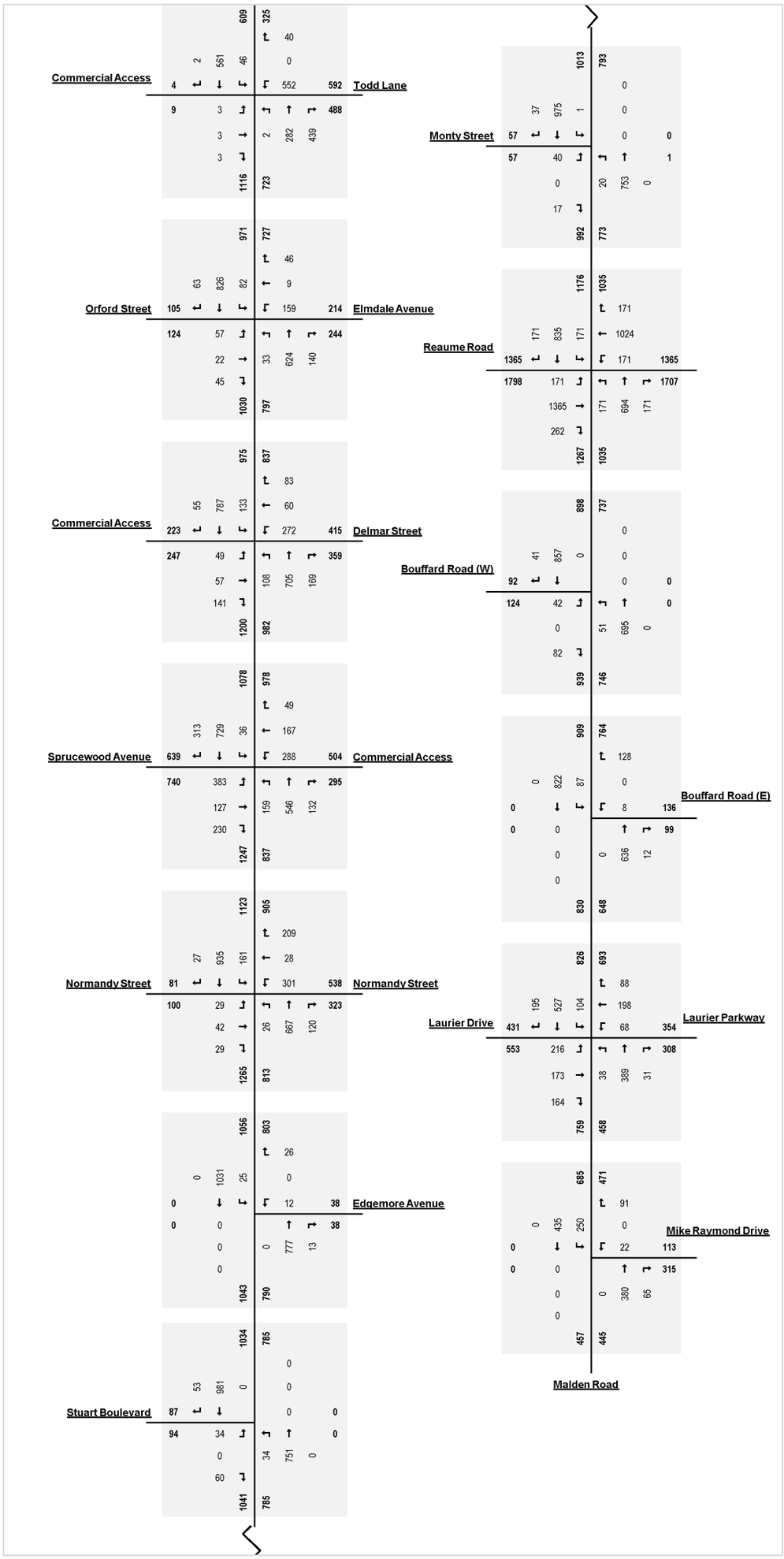


Figure 30: Future (2041) Extensions Network Alternative- PM Peak Hour Trips

Table 17: Future 2041 Network Extensions Alternative | Intersection Level-of-Service Analysis | Peak Hour

Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q (m)	LOS	Delay	v/c	Q (m)	
Malden Road & Todd Lane *(Roundabout)*	WB	C	21	0.68	2.5	F	140	1.03	25	
	SB	B	14	0.48	1.1	F	652	1.31	99	
	EB	A	8	0.03	0	B	12	0.03	0	
	NB	E	38	0.86	6.3	F	190	1.09	44	
Malden Road & Orford Street/Elmdale Avenue *(Signalized)*	EBL	B	15	0.09	11	B	18	0.14	17	30
	EBT	B	14	0.02	6	B	17	0.07	12	-
	WBL	B	15	0.10	14	C	22	0.38	42	12
	WBT	B	14	0.06	9	B	17	0.05	9	-
	NBL	A	4	0.06	1	A	7	0.16	2	66
	NBT	B	17	0.82	29	B	16	0.83	29	-
	NBR	A	1	0.06	0	A	3	0.10	1	-
	SBL	B	18	0.28	10	C	21	0.45	18	88
	SBT	B	16	0.45	35	B	17	0.58	56	-
	Intersection	***B***	***15***	***0.47***	***-***	***B***	***16***	***0.63***	***-***	***-***
Malden Road & Delmar Street *(Signalized)*	EBL	B	17	0.07	10	C	20	0.14	16	20
	EBT	B	16	0.05	8	C	21	0.25	28	-
	WBL	B	19	0.21	21	D	51	0.86	103	45
	WBT	B	17	0.08	12	C	20	0.19	25	-
	NBL	B	13	0.22	5	C	23	0.52	8	23
	NBT	C	22	0.69	65	C	25	0.77	64	-
	SBL	B	18	0.34	13	C	25	0.55	17	23
	SBT	C	20	0.52	27	B	18	0.74	40	-
	Intersection	***B***	***20***	***0.43***	***-***	***C***	***25***	***0.79***	***-***	***-***
Malden Road & Sprucewood Avenue *(Signalized)*	EBL	D	39	0.82	75	F	101	1.09	122	105
	EBT	C	27	0.33	30	D	52	0.84	91	-
	WBL	C	22	0.33	21	F	220	1.37	94	50
	WBT	C	24	0.10	13	C	31	0.41	42	-
	WBR	C	23	0.02	0	C	25	0.03	0	50
	NBL	C	20	0.40	16	E	58	0.85	37	21
	NBT	C	25	0.58	45	C	35	0.59	78	-

	SBL	B	15	0.09	7	C	23	0.11	7	21
	SBT	C	31	0.58	60	E	59	0.96	128	-
	Intersection	***C***	***28***	***0.67***	***-***	***E***	***70***	***1.12***	***-***	***-***
Malden Road & Normandy Street *(Signalized)*	EBL	B	14	0.06	6	B	16	0.09	8	30
	EBT	B	14	0.05	9	B	16	0.09	13	-
	WBL	C	23	0.38	35	D	39	0.77	104	33
	WBT	B	20	0.18	17	C	22	0.21	22	-
	NBL	B	16	0.03	3	B	19	0.14	6	24
	NBT	C	33	0.79	66	C	32	0.79	77	-
	SBL	D	41	0.75	38	B	17	0.68	9	22
	SBT	B	19	0.56	34	C	30	0.97	80	-
	Intersection	***C***	***28***	***0.67***	***-***	***E***	***70***	***1.12***	***-***	***-***
Malden Road & Laurier Drive/ Laurier Parkway (Signalized)	EBL	C	23	0.52	40	C	22	0.53	43	50
	EBT	C	34	0.70	76	D	40	0.76	90	-
	WBL	C	30	0.08	5	C	23	0.24	16	46
	WBT	D	35	0.52	32	C	32	0.50	53	-
	WBR	C	31	0.03	0	C	27	0.07	6	46
	NBL	B	14	0.08	9	B	20	0.20	10	45
	NBT	C	25	0.63	120	D	35	0.75	129	-
	SBL	B	13	0.17	13	B	18	0.36	22	81
	SBT	B	18	0.30	52	D	41	0.86	174	-
	SBR	B	15	0.09	6	C	21	0.19	22	46
	Intersection	***C***	***25***	***0.62***	***-***	***C***	***33***	***0.79***	***-***	***-***
Malden Road & Edgemore Avenue *(Un-Signalized)*	WBLR	C	19	0.13	3	E	39	0.27	8	-
	SBL	A	9	0.02	0	A	10	0.03	1	64
Malden Road & Stuart Boulevard *(Un-Signalized)*	EBLR	C	24	0.27	6	F	100	0.80	36	-
	NBL	A	0	0.01	0	A	2	0.07	2	-
Malden Road & Monty Street *(Un-Signalized)*	EBLR	C	23	0.21	4	F	111	0.70	26	-
	NBL	A	0	0.01	0	A	1	0.04	1	-
Malden Road & Reaume Road *(Un-Signalized)*	EBLR	F	Err	Err	Err	F	Err	Err	Err	-
	WBLR	F	Err	Err	Err	F	Err	Err	Err	-

	NBL	A	3	0.12	1	A	9	0.28	9	-
	SBL	A	3	0.14	0	A	8	0.25	7	-
Malden Road & Bouffard Road (West) *(Un-Signalized)*	EBLR	C	21	0.31	10	F	92	0.83	42	-
	NBL	A	1	0.02	1	A	2	0.08	2	-
Malden Road & Bouffard Road (East) *(Un-Signalized)*	WBLR	C	18	0.27	8	C	22	0.40	14	-
	SBL	A	2	0.07	2	A	3	0.11	3	-
Malden Road & Mike Raymond Drive *(Un-Signalized)*	WBL	B	12	0.02	0	C	22	0.10	3	-
	WBR	B	12	0.20	6	B	12	0.17	5	-
	SBL	A	8	0.06	2	A	10	0.26	8	-
*Err indicates exceptionally High Delays and Queue length										

5.3.3 Previously Planned Improvement Alternative

Intersection operations at signalized and unsignalized intersections within the study area were analyzed under forecast 2041 peak hour traffic conditions with the recommended road improvements made in the previous (2009) EA report for Malden Road. As such the following improvements were considered as a part of our previously planned alternative analysis:

- Three-lane cross-section (one lane in each direction + continuous centre two-way turning lane) on Malden Road between the Cahill Drain to Meagan Drive;
- Re-align and signalize the Bouffard Road intersection so that Bouffard Road East aligns with Bouffard Road West at Malden Road (as per the original traffic analysis completed for the ESR);
- Extension of Reaume Road, adding a fourth leg (Westbound) and auxiliary left turn lanes on all approaches at the intersection with Malden Road. The intersection would remain unsignalized;
- The addition of on-road painted bike lanes between the Cahill Drain and Todd Lane, with on-road shared cycling facilities south of Cahill Drain. This is complemented with an off-road multi-use trail predominantly on the east side of the road; and
- A mid-block pedestrian/cyclist connection at the Cahill Drain to enhance east-west active transportation connections across Malden Road and connect to the Town's trail system.

The roadway improvements are visualized in **Figure 31** and the active transportation improvements are shown in **Figure 34** with the intersection operational results summarised in **Table 18.**

Roadway Operations:

The forecasted volumes for the future 2041 AM and PM peak hours are presented in **Figure 32** and **Figure 33**. In the AM Peak hour four movements are anticipated to operate at a LOS 'E' or worse including: the eastbound left-turn, eastbound through/right turn, westbound left, and westbound through-left movements at Reaume Road and Malden Road (LOS 'E'). The eastbound and westbound through-right turn movements at Reaume Road are anticipated to operate with a V/C of 4.57 and 3.91 respectively which shows that the movement will operate well over capacity. These operations are a result of the high volume of traffic that is anticipated to be re-distributed to east-west corridors as part of town-wide TMP improvements.

In the PM Peak hour, the previously planned alternative sees constrained operations at east-west minor roadways such as Sprucewood Avenue, Normandy Street and Reaume Road where movements operate with LOS' between 'E' and 'F'. At Malden Road and Sprucewood Avenue both eastbound and westbound left turn lanes operate with V/C ratios over one. This results in a movement delay of 130 and 294 seconds for the eastbound and westbound left turns respectively, however the overall intersection operates with reduced delays and a V/C ratio relative to the 'Do Nothing' scenario.

Additionally, the overall intersection of Malden Road & Laurier Drive/ Laurier Parkway will operate with greater capacity and lower delays relative to the “Do Nothing” scenario with a V/C of 0.83 and corresponding delay of 35 seconds. At Malden Road and Normandy Street, only the westbound left turn operates with a LOS of ‘F’ and corresponding V/C ratio of 1.08. The southbound through movement also operates with a V/C ratio of 1.05 resulting in queues of over 64 metres. Lastly, the Malden Road and Reaume Road intersection will operate with the eastbound and westbound movements operating with a LOS of ‘F’ similar to the AM peak hour and “Do Nothing” PM peak hour. The high north-south volume along Malden Road still presents a barrier for east-west movements to cross Malden Road between vehicular gaps.

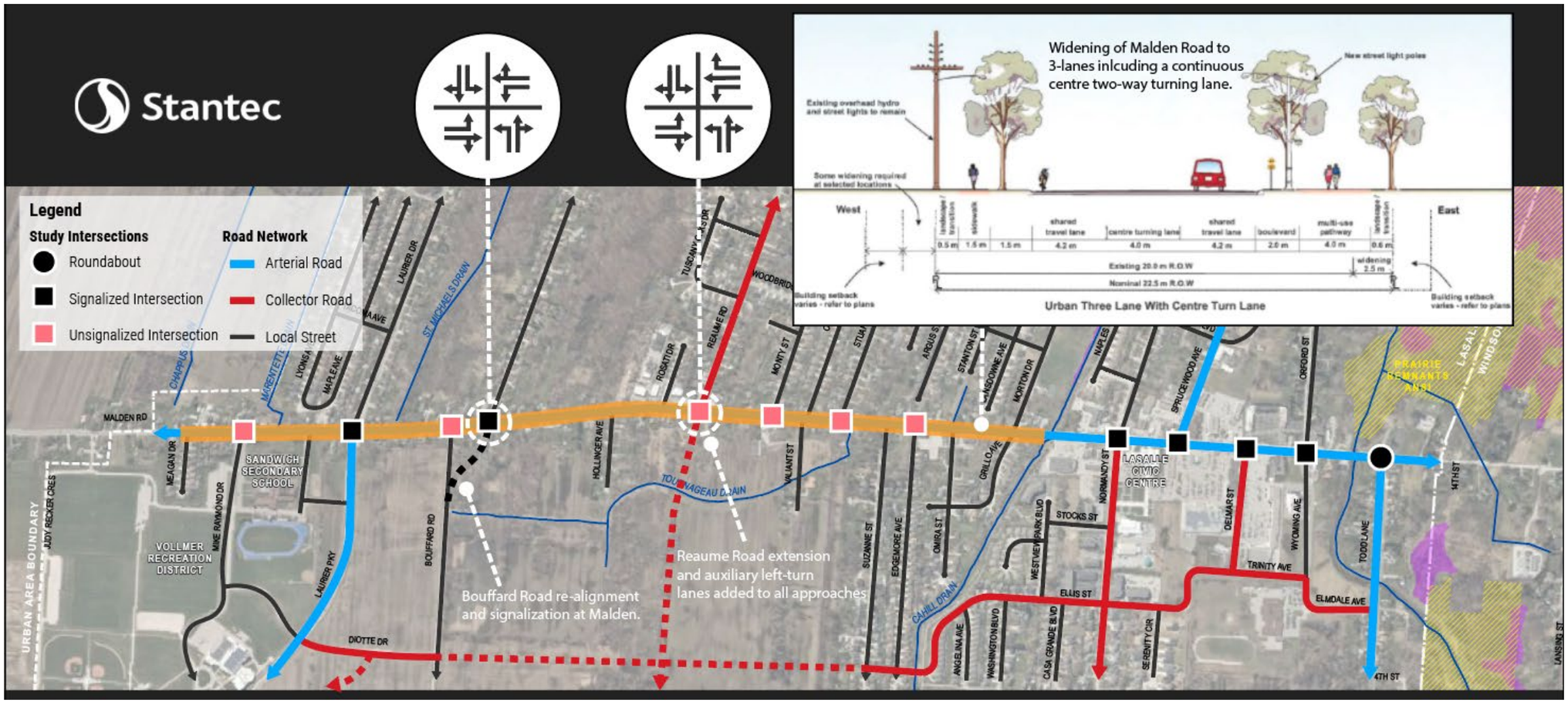


Figure 31: Future Previously Planned 2041 Road Network

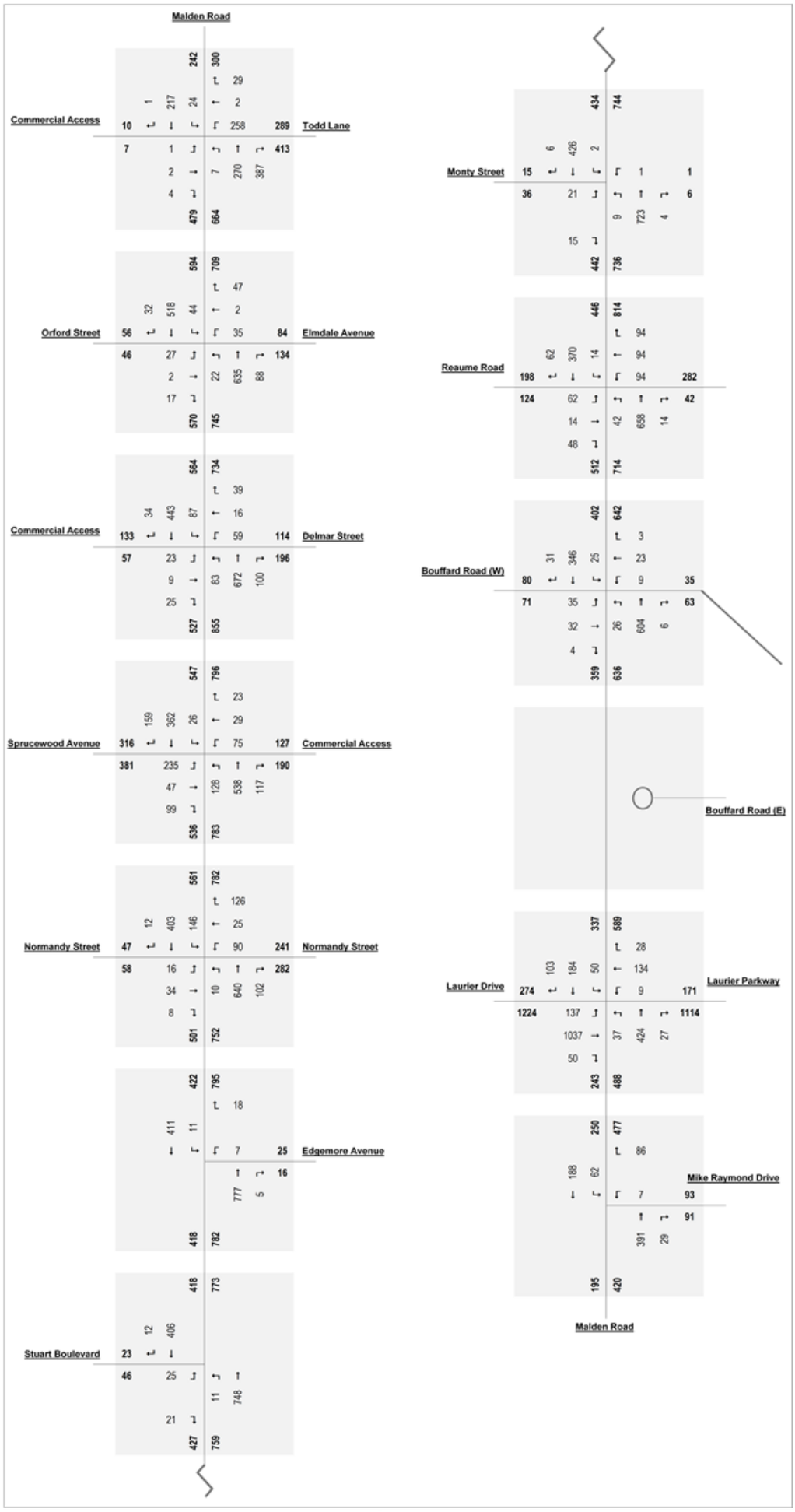


Figure 32: Future (2041) Previously Preferred Alternative- AM Peak Hour Trips

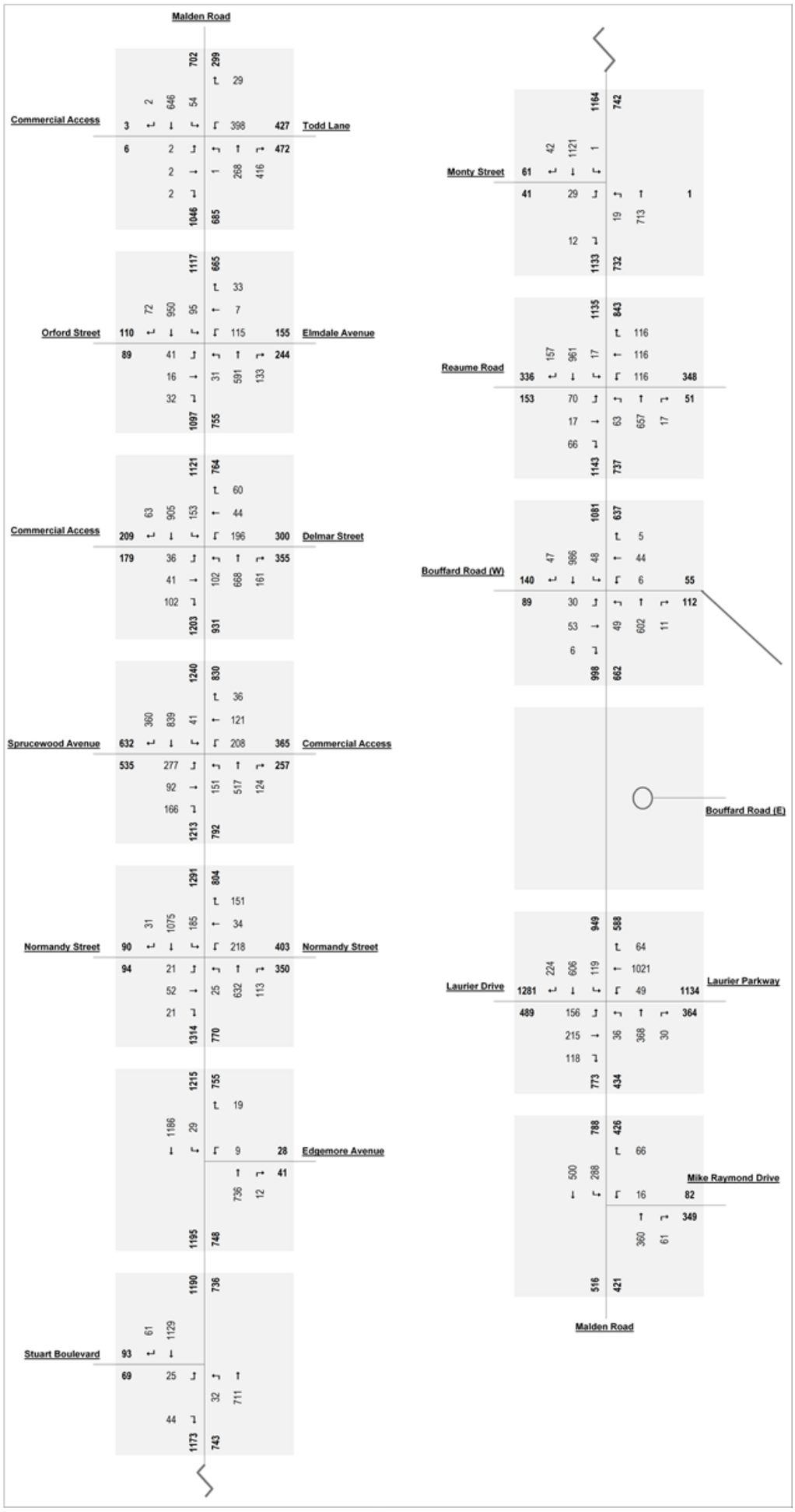


Figure 33: Future (2041) Previously Preferred Alternative- PM Peak Hour Trips

Table 18: Future 2041 Previously Planned Alternative | Intersection Level-of-Service Analysis | Peak Hour

Intersection	Movement	AM Peak Hour				PM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q	LOS	Delay	v/c	Q	
Malden Road & Todd Lane *(Roundabout)*	WB	C	21	0.68	3	F	140	1.03	25	-
	SB	B	14	0.48	1	F	652	1.31	99	-
	EB	A	8	0.03	0	B	12	0.03	0	-
	NB	E	38	0.86	6	F	190	1.09	44	-
Malden Road & Orford Street/Elmdale Avenue *(Signalized)*	EBL	B	15	0.09	11	*B*	*19*	*0.15*	*17*	30
	EBT	B	14	0.02	6	*B*	*18*	*0.07*	*12*	-
	WBL	B	15	0.10	14	*C*	*22*	*0.37*	*41*	12
	WBT	B	14	0.06	9	*B*	*18*	*0.06*	*10*	-
	NBL	A	4	0.06	1	*A*	*7*	*0.15*	*2*	66
	NBT	B	17	0.82	29	*B*	*16*	*0.83*	*24*	-
	NBR	A	1	0.06	0	*A*	*3*	*0.11*	*1*	-
	SBL	B	18	0.28	10	*C*	*24*	*0.49*	*20*	88
	SBT	B	16	0.45	35	*B*	*17*	*0.62*	*59*	-
	Intersection	***B***	***15***	***0.47***	***-***	***B***	***16***	***0.63***	***-***	***-***
Malden Road & Delmar Street *(Signalized)*	EBL	B	17	0.07	10	*C*	*20*	*0.13*	*16*	20
	EBT	B	16	0.05	8	*C*	*22*	*0.24*	*29*	-
	WBL	B	19	0.21	21	*E*	*72*	*0.97*	*108*	45
	WBT	B	17	0.08	12	*C*	*21*	*0.19*	*26*	-
	NBL	B	13	0.22	5	*B*	*14*	*0.44*	*4*	23
	NBT	C	22	0.69	65	*C*	*23*	*0.78*	*68*	-
	SBL	B	18	0.34	13	*C*	*30*	*0.57*	*19*	23
	SBT	C	20	0.52	27	*C*	*24*	*0.77*	*45*	-
	Intersection	***B***	***20***	***0.43***	***-***	***C***	***28***	***0.84***	***-***	***-***
Malden Road & Sprucewood Avenue *(Signalized)*	EBL	D	39	0.82	75	F	130	1.17	130	105
	EBT	C	27	0.33	30	E	57	0.88	97	-
	WBL	C	22	0.33	21	F	294	1.54	105	50
	WBT	C	24	0.10	13	C	31	0.43	44	-
	WBR	C	23	0.02	0	C	25	0.04	0	50
	NBL	C	20	0.40	16	E	71	0.90	35	21
	NBT	C	25	0.58	45	C	22	0.62	49	-

	SBL	B	15	0.09	7	B	15	0.13	5	21
	SBT	C	31	0.58	60	E	67	1.04	101	-
	Intersection	***C***	***28***	***0.67***	***-***	***F***	***82***	***1.23***	***-***	***-***
Malden Road & Normandy Street *(Signalized)*	EBL	B	14	0.06	6	B	17	0.10	8	30
	EBT	B	14	0.05	9	B	17	0.10	13	-
	WBL	C	23	0.38	35	F	104	1.08	117	33
	WBT	B	20	0.18	17	C	24	0.23	21	-
	NBL	B	16	0.03	3	B	19	0.16	6	24
	NBT	C	33	0.79	66	C	33	0.82	84	-
	SBL	D	41	0.75	38	C	29	0.86	15	22
	SBT	B	19	0.56	34	D	52	1.05	64	-
	Intersection	***C***	***27***	***0.57***	***-***	***D***	***46***	***0.98***	***-***	***-***
Malden Road & Laurier Drive/ Laurier Parkway *(Signalized)*	EBL	C	23	0.52	40	C	25	0.58	45	50
	EBT	C	34	0.70	76	D	45	0.81	103	-
	WBL	C	30	0.08	5	C	24	0.30	16	46
	WBT	D	35	0.52	32	C	34	0.58	57	-
	WBR	C	31	0.03	0	C	28	0.08	7	46
	NBL	B	14	0.08	9	C	21	0.23	10	45
	NBT	C	25	0.63	#120.2	D	37	0.77	137	-
	SBL	B	13	0.17	13	B	19	0.42	24	81
	SBT	B	18	0.30	52	D	45	0.88	190	-
	SBR	B	15	0.09	6	C	21	0.22	25	46
	Intersection	***C***	***25***	***0.62***	***-***	***D***	***35***	***0.83***	***-***	***-***
Malden Road & Bouffard Road *(Signalized)*	EBL	D	42	0.47	19	D	41	0.42	17	25
	EBT	D	39	0.29	17	D	41	0.50	27	-
	WBL	D	38	0.11	7	D	38	0.08	6	25
	WBT	D	39	0.19	13	D	40	0.36	21	-
	NBL	A	2	0.03	3	A	3	0.15	5	25
	NBT	A	3	0.42	45	A	4	0.51	61	-
	SBL	A	2	0.05	3	A	2	0.10	5	25
	SBT	A	3	0.32	30	A	7	0.72	128	-
	Intersection	***A***	***8***	***0.42***	***-***	***A***	***10***	***0.69***	***-***	***-***
Malden Road & Edgemore Avenue	WBLR	C	15	0.10	3	C	20	0.16	4	-

(Un-Signalized)	SBL	A	9	0.02	0	A	10	0.04	1	-
Malden Road & Stuart Boulevard *(Un-Signalized)*	EBLR	B	15	0.16	4	D	33	0.46	17	-
	NBL	A	9	0.01	0	B	12	0.07	2	-
Malden Road & Monty Street *(Un-Signalized)*	EBLR	B	14	0.12	3	D	25	0.26	8	-
	NBL	A	8	0.01	0	B	11	0.03	1	-
Malden Road & Reaume Road *(Un-Signalized)*	EBL	F	Err	No Capacity Error	Err	F	Err	No Capacity Error	Err	-
	EBTR	F	Err	4.57	Err	F	Err	87.63	Err	-
	WBL	F	Err	No Capacity Error	Err	F	Err	No Capacity Error	Err	-
	WBTR	F	Err	3.91	Err	F	Err	100.44	Err	-
	NBL	A	9	0.12	3	B	14	0.32	11	-
	SBL	A	10	0.14	4	B	12	0.25	8	-
Malden Road & Mike Raymond Drive *(Un-Signalized)*	WBL	B	12	0.02	0	C	22	0.10	2	-
	WBR	B	12	0.20	6	B	12	0.16	4	-
	SBL	A	8	0.06	2	A	10	0.25	8	-

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
Err indicates exceptionally High Delays and Queue length

Active Transportation Operation Considerations

Beyond roadway operations, the previously proposed on-road cycling facilities between Todd Lane and the Cahill Drain were unable to be accommodated within the right-of-way when this section of roadway was being expanded in 2011. As a result, the roadway currently operates with a shared roadway cycling facility (sharrow) in this section. Considering the anticipated vehicular volumes that will reach up to 1,200 vehicles in the peak direction by 2041, this is likely to present safety and operational challenges for cyclists and motorists on this section. The southbound through movements are approaching capacity, and the presence of cyclists may restrict the capacity on this section of roadway as well as the remainder of the corridor since cyclists generally travel between 10-20 km/h requiring motorists to change lanes to pass a cyclist. Furthermore, existing field observations have identified that a portion of cyclists along Malden Road already prefer to travel along the sidewalk instead of sharing the roadway, likely due to high volumes of traffic that may intimidate novice cyclists. With the advent of new residential neighbourhoods along Malden Road it will be important to consider a context-sensitive approach to Malden Road that generally enhances safety, comfort, access, and connectivity to the broader cycling network.

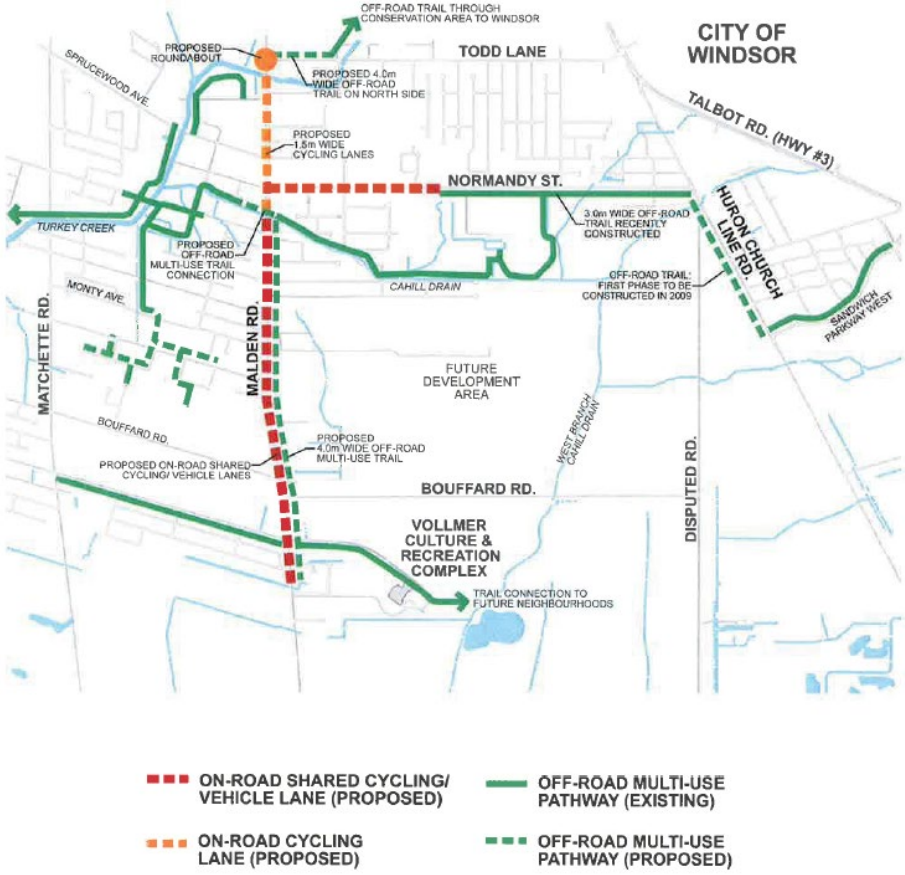


Figure 34: Previously Planned Active Transportation Improvements

Source: Malden Road Class Environmental Assessment, 2009

5.3.4 Improved Alternative with Three-Lane Cross-Section

Based on the operational analysis of the previously recommended alternatives a preferred alternative solution was developed with the following improvements.

5.3.4.1 Recommended Transit Improvements

The Existing transit service along Malden Road provides good coverage along the entire stretch of the road within the study area limits. With the present configuration of the route a bus can take up to 45 minutes to cover the entire route. Additionally, though the one-way loops on the route maximize coverage, they also increase the time for trips that would go the 'wrong' way around the loop. It is thus recommended that the town explore additional options to increase the frequency of transit along the route and provide bidirectional service. This could encourage a mode shift on the trips along Malden road and reduce congestion. This also provides an opportunity to create first/last-mile multi-modal transit connections at Reaume Road and Bouffard Road to leverage planned active transportation facilities on those roadways.

5.3.4.2 Recommended Roadway Improvements

Several roadway improvements are recommended to address vehicular deficiencies identified through our analysis of the previously proposed solutions for Malden Road. These recommendations include physical measures, as well as access management policy measures to support the corridor's growth into the future. A visual summary of recommended solutions is shown in **Figure 35** on the following page.

Centre Two Way Left Turning Lane

We recommend keeping the previously planned recommendation for widening Malden Road between Cahill Drain in the north to Meagan Drive to include a three-lane cross-section with a centre two-way left-turning lane (TWLTL). A Two Way Left Turning Lane (TWLTL) lets left-turning vehicles from both directions wait for a chance to turn without holding up through traffic. Such a lane provides the most benefit on sections of a corridor like Malden Road with closely spaced driveways. Additionally, when a TWLTL is added to complement the two-lane cross section on the section of Malden Road, accidents may be reduced. This reduction is possible as stopped or slow left-turning vehicles are removed from the through lanes. Drivers in the TWLTL may feel more comfortable waiting for an adequate gap in traffic, as they are protected from through vehicles. The inclusion of this improvement was shown to enhance east-west approach operations at minor roadway intersections by providing a centre refuge area for turning vehicles.

Signal Timing Optimization

We recommend monitoring intersection operations over time and developing an updated coordinated signal timing plan across the corridor that synchronizes traffic movements and manages the progression speed of specific modes where uninterrupted flow is desired along a corridor. While we have analyzed future operations, under the 'Do Nothing' and 'Previously Planned' scenarios for Malden Road using the existing signal timing plans, the vehicular volume growth along with new signalized intersections will likely require signal coordination changes to accommodate higher north-south vehicular volumes. The previously planned network was shown to have poorly operating north-south through movements, particularly between Todd Lane and Normandy Street due to increased vehicular volumes. Considering that two new intersections are proposed to be signalized in this alternative, along with an additional potential active transportation crossing at Cahill Drain, it is essential that signal timing plans at all intersections be optimized and coordinated.



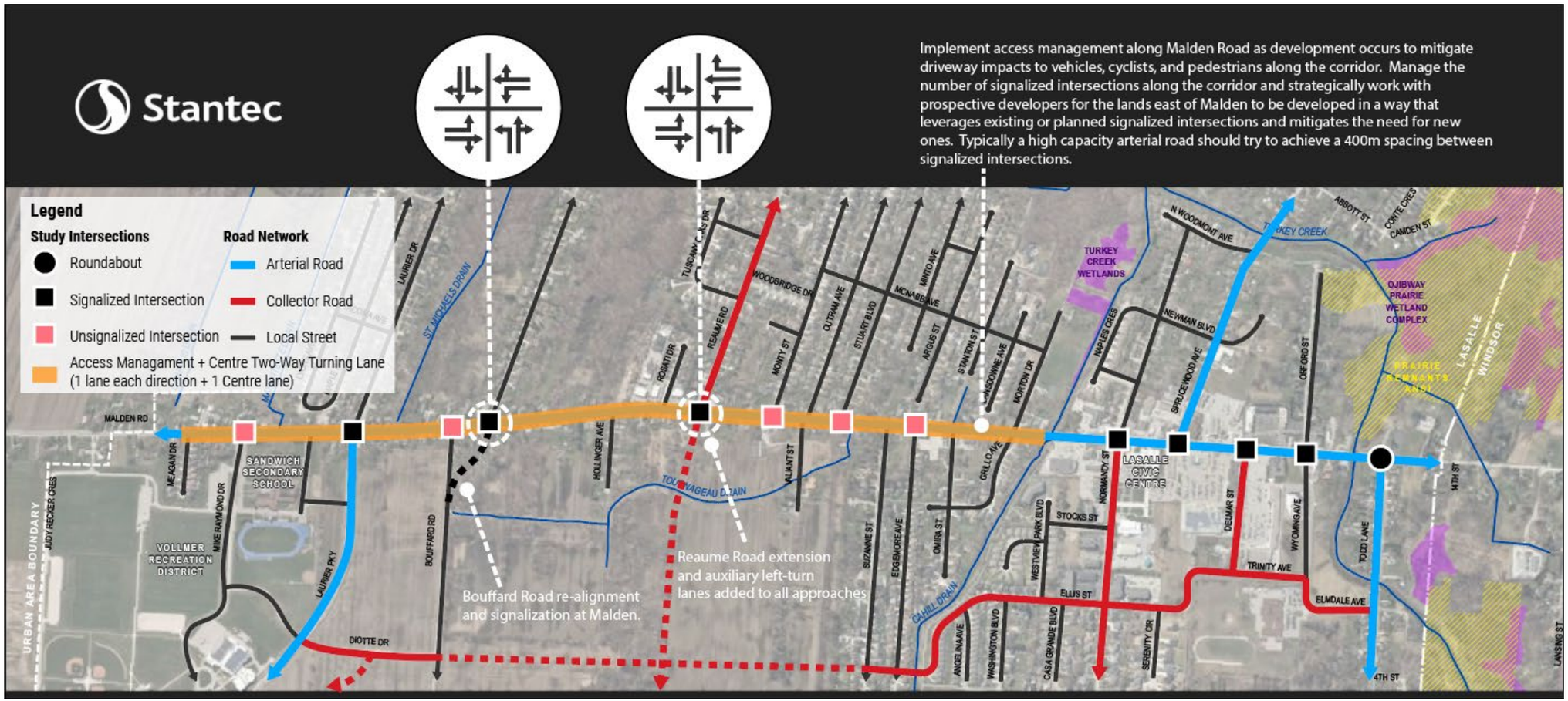


Figure 35: Improved Alternative 2041 Road Network with Three-Lane Cross-Section

Intersection Improvements

Malden Road & Reaume Road

The extension of Reaume Road by introduction of a fourth leg (Westbound) at the intersection will create an induced demand for east-west movements. Taking into consideration the extensive delays on the minor approaches it is recommended that the intersection be signalized for better operational and safety performance. This can be linked with enhanced pedestrian and cycling east-west connections. Currently, Reaume Road has an in-boulevard multi-use path on the north side of the road. The Town of LaSalle TMP identifies future on-street bike lanes and an in-boulevard path along the Reaume Road extension.

Specifically, the intersection is proposed to be signalized with dedicated left-turning lanes at all approaches, and southbound auxiliary right-turn. The proposed storage lengths of each of the auxiliary lanes were determined through operational queuing analysis with the intent of accommodating forecasted 95th percentile queues. The proposed storage lengths for each movement are as follows:

- SBL: 35m;
- SBR: 25m;
- NBL: 25m;
- EBL: 40m;
- WBL: 25m;

Malden Road & Bouffard Road

At present, Bouffard Road East and Bouffard Road West form a staggered intersection with Malden Road and are spaced approximately 110m apart. It is observed that a considerable number of vehicles make a right out of the minor approaches into Malden Road and an immediate left into the counter approach. As the east -west flows are predicted to grow, it is anticipated that even more vehicles will attempt to undertake this unsafe maneuver. As such the stop-controlled approaches perform poorly during the Future PM peak hour resulting in extensive delays. To address this, it is proposed to realign and signalize the Bouffard Road intersection be implemented to improve the operational and safety performance at the intersection. This can be linked with enhanced pedestrian and cycling east-west connections. The Town of LaSalle TMP identifies a future in-boulevard path along Bouffard Road between Malden Road in the west and Disputed Road in the east.

Specifically, the intersection is proposed to be signalized with dedicated left-turning lanes at all approaches. The recommend storage lengths of each of the auxiliary lanes were determined through operational queuing analysis with the intent of accommodating forecasted 95th percentile queues. The proposed storage lengths for each movement are as follows:

- SBL: 25m;
- NBL: 15m;
- EBL: 15m;
- WBL: 15m;

Malden Road & Laurier Drive / Laurier Parkway

One of the main objectives of the Town of LaSalle TMP is to relieve traffic on constrained north-south corridors such as Malden Road by shifting a portion of the volume to other north-south corridors in the east.

Volumes along the north-south movements on Malden Road were redirected onto Laurier Drive in addition to Reaume Road and Diotte Street. The 15 and 30% reduction in volumes discussed in **Section 5.2** were distributed to Reaume Road, Diotte Street and Laurier Drive.

This results in significant vehicular volume growth on the east-west through movements on Laurier Parkway resulting in poor operations at the intersection of Malden Road and Laurier Parkway. Operations at the intersection were assessed by implementing a 46m auxiliary westbound right-turn lane and dual eastbound through lanes to conform with the TMP plans for the widening of Laurier Parkway to a four-lane cross-section. Though the improvements resulted in improved operations, these results show that improvements along this corridor are likely required to be further evaluated and addressed under a future environmental assessment of Laurier Parkway.

Roundabout Considerations

Through consultation with the County of Essex, it was identified that roundabouts should be considered wherever new intersections or signalizations are proposed. Based on our proposed improvements above, two new signalized intersections would be added along Malden Road including:

- Malden Road & Reaume Road; and
- Malden Road & Bouffard Road (Re-aligned).

In light of no roundabout screenline guidelines from the County, a review of best-practices for county and regional roundabout guidelines was conducted and identified the following criteria that often triggers the need to consider a roundabout:

1. A new intersection on a County Road;
2. An existing intersection on a County Road where traffic signals are warranted;
3. An existing intersection on a County Road which is programmed for modifications to address an identified capacity or safety problem; and
4. Any other location as determined by staff.

If a location meets one or more of these criteria, a Roundabout Screening Assessment should be completed. This process will screen out possible locations for roundabouts based on proposed locations and estimated cost. Several economic and non-economic criteria are used to evaluate each intersection. The results of this study have been summarized in **Table 19** on the following page.

Table 19: Proposed Suitability Factors for Roundabouts

No.	Suitability Factor	Outcome	
		Reaume Road	**Bouffard Road**
1	Is there a historical safety problem at the intersection for motorists or pedestrians?	N	Y
2	Are capacity problems currently being experienced or expected in the future?	Y	Y
3	Is there a high proportion of turning movements at the intersection?	N	N
4	Are traffic signals warranted, or expected to be warranted in the future?	Y	Y
5	Does the intersection experience high side-street delays under stop control (but not enough to warrant traffic signals)?	N	N
6	Is there sufficient property at the intersection (i.e. over 50 metres clear diameter if considering a single-lane roundabout, and over 65 meters clear diameter if considering a 2-lane roundabout)?	N	N
7	Does the intersection have more than 4 legs, or unusual geometry?	N	N
8	Will planned modifications to the intersection require that nearby structures be widened (i.e. to accommodate turn lanes)?	Y	Y
9	Is the intersection located at a transition between rural and urban environments (i.e. an urban boundary) such that a roundabout could act as a means of speed transition?	N	N
10	Is the intersection located at a neighborhood or commercial entry such that a roundabout could act as a gateway feature?	N	Y
	Roundabout Suitable?	**N**	**N**
Y = Yes, N = No			

Consideration and notes for each of the suitability factors are as follows:

1. The Potential for Safety Improvement (PSI) rankings, collision history and collision rates were all considered. The existing intersections at Reaume Road and Bouffard Road East have a historical collision rate of 0.74 and 1.46, respectively. The Reaume Road intersection experiences a similar or lower collision rate to other major crossing street intersections along the corridor, however the intersection with Bouffard Road experiences one of the highest collision rates along the corridor (the Sprucewood intersection being the only other intersection with a higher collision rate).
2. Evaluations of possible level of service issues at each intersection were conducted under both existing and future conditions based on existing and forecasted volumes. Specifically, the operations from the Do-Nothing Alternative scenario for the intersections was used for this evaluation. Overall Intersections operating at LOS 'F', or with a V/C ratio of 0.85 or higher, were indicated as 'Yes'. Both intersections operate poorly in the future without any improvements.
3. Turning movement data obtained from existing counts, as well as forecasted volumes were used when evaluating this factor. When turning movements from both the major and minor approaches comprised a significant portion of the total traffic moving throughout the intersection, the intersection was marked as 'Yes'. Based on our evaluation it was determined that most of the volume at the intersections are through movements going east-west or north-south.
4. All candidate intersections within the study area are currently unsignalized but are warranted.
5. All candidate intersections within the study area are currently unsignalized but are warranted due to side-street delays.
6. Property availability was assessed at each intersection to determine if sufficient property could be made available to construct a single-lane roundabout. Additional factors were considered due to the nature and locations of the proposed roundabouts. It was determined that there would be significant impacts to existing property owners due to space constraints.
7. No intersections exceed four legs or have unusual geometry.
8. Auxiliary left-turning lanes are recommended at all approaches at the Bouffard Road and Reaume Road intersections. Additionally, Reaume Road would include an auxiliary southbound right-turn lane. These improvements would require widening at the intersection to accommodate them.
9. None of the intersections are located at a transition between rural and urban environments and would not act as a means of speed transition.
10. The roundabout at Bouffard Road could act as a gateway feature to the broader Malden Road corridor, however the intersection at Reaume Road would not act as a gateway feature.



Contra-Indications for Roundabouts have been highlighted in **Table 20**, below. As per the Guidelines, if one or more of the contra-indication factors are satisfied, a roundabout may pose design or economic difficulties at the proposed location. A single contra-indication should not dismiss the consideration of a roundabout at a specific location, but it should warrant extra caution.

Table 20: Proposed Contra-Indications for Roundabouts

No.	Suitability Factor	Outcome	
		Reaume Road	**Bouffard Road**
1	Are there any approaches where stopping sight distance (SSD) of a roundabout yield line may not be attainable (i.e. the intersection is on a crest vertical line)?	N	N
2	Is there an existing uncontrolled approach with a grade in excess of 4 percent?	N	N
3	Is there a closely spaced traffic signal or railway crossing that would not be controlled with a nearby roundabout?	N	Y
4	Is the intersection part of a coordinated arterial signal system, such that a roundabout would disrupt traffic platoons?	Y	Y
5	Does the intersection experience a heavy flow of through traffic on the major street opposed by relatively light traffic on the minor street?	Y	Y
6	Are there one-way streets or reversible traffic lanes approaching the intersection?	N	N
a	Are there significant impacts to adjacent properties?	Y	Y
b	Are there significant impacts to existing infrastructure?	Y	Y
c	Are there significant impacts to existing entrances?	Y	Y
7	Are there known visually impaired pedestrians that cross the intersection?	N	N
8	Lane drop required NB and SB in order to implement two-lane roundabout?	N	N
	Roundabout Suitable?	**N**	**N**
Y = Yes, N = No			

Notes and considerations for each of the contra-indication factors is as follows:

1. There are no significant obstructions to sightlines under the existing conditions at each intersection, however both intersections are planned to have an additional leg which would require property acquisition and it is difficult to determine whether the configuration would satisfy sightlines at these new approaches.
2. None of the intersections have a significant grade at their uncontrolled approaches.
3. The intersection at Bouffard road is approximately 310m form the existing Laurier Parkway signalized intersection which is less than the 400m that is recommended for High Capacity Urban Arterials, while the Reaume Road intersection is approximately 580m away from the proposed Bouffard Road intersection and 1.1km away from the next closest signalized intersection at Normandy Street.
4. Through consultation with the Town of LaSalle, it was revealed that the corridor has signal coordination implemented and a roundabout could potentially disrupt traffic platoons.
5. Traffic volumes show that volumes along Malden Road are significantly higher than on the opposing side streets.
6. There are no one-way streets or reversible traffic lanes approaching any intersection within the study area.
    a. Potential impacts to adjacent property were identified at each location. Any significant impacts which would affect the daily operations on a property were marked as ‘Yes’.
    b. Potential impacts to existing structures were identified. Locations where a proposed roundabout would intersect or be in close proximity to structures on the property were marked as ‘Yes’.
    c. Potential impacts to existing property entrances were determined. Locations where a proposed roundabout would intersect or be in close proximity to a property entrance were marked as ‘Yes’.
7. There are no known visually impaired pedestrians crossing any intersection within the study area, however this can’t be ruled out and facilities should all be designed to AODA accessibility standards which would accommodate visually impaired pedestrians.
8. With a planned one lane in each direction on Malden Road, it would not be necessary to drop a lane in advance of each roundabout.
9. The regional nature of the Malden Road corridor means that there are large trucks and transit buses using the intersections. While roundabouts can be designed to accommodate vehicles with wide, large radius turning movements, these vehicles may tend to set the design parameters for the roundabout, resulting in a non-optimal design for smaller vehicles. This could result in a larger roundabout diameter to accommodate these vehicles, further impacting adjacent land.



Conclusion: Based on the suitability and contra-indications for roundabouts it is not recommended that roundabouts be implemented at the Reaume Road and Bouffard Road intersections primarily on account of the impacts to adjacent properties.

5.3.4.3 Recommended Access Management Considerations

The “Essex County Highways, Best Management Practice Manual” recommends that the intersection spacings along a Road should be based on a function of traffic volume, operating speeds, and other considerations. In order to maximize the capacity of the roadway, opportunities to control the number and type of entrances along Malden Road can be considered.

Goals and Objectives

The goal of the recommended Access Management alternatives is to support safe and efficient multi-modal functioning for all roadway users (cars, trucks, transit vehicles, emergency vehicles, pedestrians, and bicyclists), especially as traffic volumes increase and adjacent land use develops/redevelops over time. Specifically, Access Management seeks to achieve the following goals and objectives:

- Minimize conflicts and opportunities for collisions between vehicles, pedestrians, and cyclists;
- Preserve and make full use of existing road capacity and avoid / defer further widening needs;
- Provide smoother traffic flow and reduce sudden stops / lane changes;
- Provide a reasonable level of access to properties;
- Concentrate turning movements at intersections where left turn lanes and signal phasing can be used to improve safety and operations; and
- Reduce short auto trips within the corridor to encourage walking and cycling.

Access Management Opportunities

Through Access Management, the number of current entrances / road intersections along Malden Road could be reduced (where feasible and beneficial) and strategies to control and/or limit new entrances to Malden Road could be developed and implemented. Potential Access Management opportunities include:

- Close some minor intersections or prohibit left turns;
- Reduce the number of direct entrances to Malden Road;
- Close entrances / share entrances; and
- Restrict new entrances.

Recommended Access Management Measures

Based on consultation with the Town of LaSalle and Essex County it is recommended that the following access management principles and practices be applied to Malden Road as outlined below:

Improve Roadway Design/ Turning Movements

The existing roadway design should be modified to incorporate improved management of turning movements, in consideration of both the roadway's function and context, through use of such techniques as a two-way centre left-turn lane, dedicated left- and right-turn lanes, raised medians, roundabouts, and/or traffic signals.

Turning movements at all access points (public roadways and private driveways) should generally be restricted to right-in/right out, unless there is a signal, median opening, and/or auxiliary turning lanes. This helps to prevent turning vehicles from impeding traffic flow.

The existing pavement edge should be reconstructed to create continuous raised curbs with fewer driveway access points. Driveways should be well defined and well designed. Undemarcated / wide fan-type driveways cause confusion and create safety hazards for motorists, pedestrians, and cyclists.

Manage Access Locations

The spacing between access locations should be increased and the number of access locations should be limited and, if possible, reduced. Frequent access points should be discouraged. This applies to both intersections with public roadways and private driveway entrances. Furthermore, the design and location of driveway entrances should be controlled.

Intersection with Public Roadways

Opportunity:

The Town of LaSalle's Official Plan, and the previously completed EA for Malden Road identified an extension of Reaume Road as well as a re-alignment of Bouffard Road East to connect directly with Bouffard Road West. As a result, the average spacing between major roadway corridors would be approximately 850m which is conducive of vehicular through movement objectives for the corridor. However, as developments occur in the future, there may be a need for additional signalized intersections to

support the movement of vehicles, pedestrians, and cyclists onto and off Malden Road, particularly from subdivisions that may be built east of the corridor. There are opportunities to balance throughput, access, and placemaking needs along Malden Road by reducing the average intersection spacing with collector or arterial roadways to encourage more active transportation and transit trips. This is done by creating more crossing opportunities and fostering a more permeable active transportation network around the corridor.

Recommendation:

Criteria should be established for spacing of intersections with public roadways broadly across the Town of LaSalle, and more specifically along Malden Road. A typically recommended minimum spacing between intersections along a High-Capacity Arterial within an urban area is 400 metres as per the Transportation Association of Canada (TAC) Geometric Design Guidelines. This spacing is recommended with the objective of mitigating pedestrian and cyclist delays associated with deviating to a signalized intersection to cross Malden Road while also mitigating the impact on through movements for vehicles travelling along the corridor. Additionally, appropriate geometric design and engineering standards should be applied at intersections to enhance safety. There is limited information regarding how the lands east of Malden Road will be developed in the future. As a result, it is recommended that future connections to Malden Road from these lands be evaluated through the development application process via traffic impact and access management studies as development applications are received.

Private Access and/or Driveways

Opportunity:

We understand that given the nature of the corridor today, a large portion of Malden Road south of Normandy street comprises single detached low-rise housing with driveways directly onto the corridor. Given the Town's Official Plan and the associated mixed-use corridor that is planned along Malden Road, there is an opportunity to gradually reduce the number of driveways and increase driveway spacing over time as development occurs. While low-rise residential dwellings typically generate little traffic, as higher density developments are built on the corridor, it will be important to strategically collate or share private driveway accesses to mitigate vehicular, pedestrian and cyclist conflicts. This is a similar approach that was applied in the northern portion of the study corridor (between Normandy and Todd) where commercial developments were built with limited or shared accesses to mitigate impacts to corridor operations.

Recommendation:

Continue to provide full access to all existing uses; however, in order to help reduce the number of access points along Malden Road, restrict private driveway access to Malden Road if the property has an alternative means of access to a public street and seek opportunities to consolidate driveway access points.

Criteria should be established for spacing of driveways along the roadway and the number of driveways per property. A recommended minimum spacing between driveways along a High-Capacity Arterial is 110m. A recommended standard for number of driveways is a maximum of one driveway per parcel, and a maximum of two driveways for properties with a long frontage. In addition to spacing considerations, appropriate geometric design and engineering standards at driveway access points should be applied, and driveways should be restricted to within sight visibility triangles.

Future Access Requests and Planning/Development Applications

Opportunity:

The Town of LaSalle identifies Malden Road as a mixed-use corridor and is planned to accommodate higher-density developments than what is currently provided along the majority of the corridor. There is an opportunity to work with the development community, as development applications are received, to mitigate the impacts of direct accesses onto Malden Road. This would allow access management measures to be implemented gradually over time as developments occur.

Recommendation:

Consideration of requests for new access to Malden Road should take into consideration the above points. Adding any additional access points should be avoided. Primary consideration should be given to seek an alternative, such as consolidation with an existing driveway or access to another roadway. **Table 21** shows an example of how access management might be achieved over time as low-rise residential developments are re-developed into higher density mixed-use developments on the corridor.

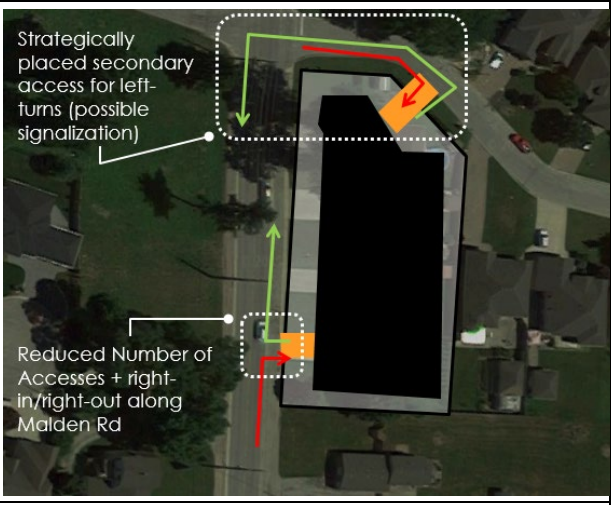
Applications for site plan approval for new development/redevelopment and/or amendments to the Official Plan/Zoning By-Law should be required to conduct an appropriate level of study in order to address resulting traffic impacts and access issues. Applications that would generate a significant amount of traffic should prepare a traffic impact/access management study. A recommended threshold for requiring a traffic impact study is when a use generates 100 vehicle trips or more during the peak hour, or 800 trips or more per day.

Directing traffic to existing access points/other roadways should be given priority. Consideration should be given to location, spacing and design of driveways, median openings, turning lanes, need for road widening, traffic signal location and spacing, and multi-modal options (such as access via public transit, walking and cycling). Encourage future access points to line up with public streets and median openings.

Seek opportunities to link internal parking areas and adjacent land uses, which would not only support reducing access points, but would also help reduce the number of cars entering Malden Road that are only making a short trip. Also, consider requiring parking areas to be located at the rear of a property. This can help encourage access from side streets, as well as help create a better pedestrian environment along Malden Road by moving buildings closer to the street.

Seek to improve transit and pedestrian access and encourage well-placed shared parking rather than individual parking lots for each individual property/use. Also, encourage non-car-oriented uses to develop along the corridor.

Table 21: Example of Driveway Access Management as Development Occurs

Existing low-rise residential driveways	Future potential mixed-use driveway management
	

Note: *Image is for visual example purposes and does not reflect a planned or proposed development.*

Summary of Access Management Recommendations

In addition to the recommended measures above, future Access Management Policies should be considered when reviewing new entrance request or development applications for the Malden Road corridor, as described below:

- New access points should be restricted to right-in/right-out unless there is a two-way left turn lane on Malden Road;
- All properties with frontage on Malden Road should be restricted to only one entrance unless supported by a traffic study demonstrating the need for additional entrances;
- Commercial entrances on corner lots should obtain access from the side road – one additional right-in/right-out entrance may be considered from Malden Road if supported by a traffic study;
- Adjacent properties should utilize shared entrances and enact appropriate easements to ensure access rights to each owner;
- Uncontrolled entrances within 65m of a signalized intersection shall be right-in/right-out and left turns should be restricted with raised median islands that extend 20 metres beyond the entrance; and
- Residential driveway spacing (for new lots) should be maximized and one shared driveway shall be used for lots with less than 15m frontage.

5.3.4.4 Roadway Operations with Recommended Improvements

Roadway Operations:

Figure 36 and **Figure 37** illustrate forecasted traffic volumes (2041) for the AM and PM peak hours with all recommended improvements and three-lane cross-section. **Table 22** displays the capacity analysis for this scenario. Generally, the recommended signalization of the Reaume Road intersection improves operations, no longer showing 'Err' or exceptionally high delays and queues in the PM peak hour by 2041. During the AM peak, no movements are expected to operate at LOS 'F', and only two movements are expected to operate at LOS 'E'. This is an improvement over the 'Previously Planned Alternative' operations, especially on Reaume Road, which showed many AM peak movements at LOS 'F', as trips are diverted away from Reaume Road to Laurier Parkway due to the road widening of that corridor. All un-signalized intersections will operate without major constraints in both AM and PM peak hours.

We note that typically, when a specific movement is constrained, traffic will dynamically re-distribute to an alternate corridor or approach. As such it is anticipated that constrained east-west through movements at the Malden Road/Reaume Road intersection would dynamically re-distribute to other parrallel east-west corridors. Due to limited information on planned development to the east of Malden Road, it was assumed that a large portion of development traffic would use Reaume Road.



However, in reality, it is likely that future development would use a variety of existing and planned parrallel local street connections which would mitigate operational constraints at the intersection. Overall, the study area will operate with improved operations over the previously planned alternative, as well as the realignment of the Bouffard Road intersection.

It must be noted that these operations represent a conservative worst-case estimate of future traffic growth by applying the County-recommended 2% growth rate along the corridor which does not take into consideration that, with the implementation of enhanced on-street cycling facilities and transit service, a portion of future demand along the corridor would shift to sustainable modes. We note that the Town of LaSalle TMP has forecasted a lower vehicular growth rate as it anticipates a portion of future demand to be shifted onto transit and active transportation which would further alleviate operations along the corridor.



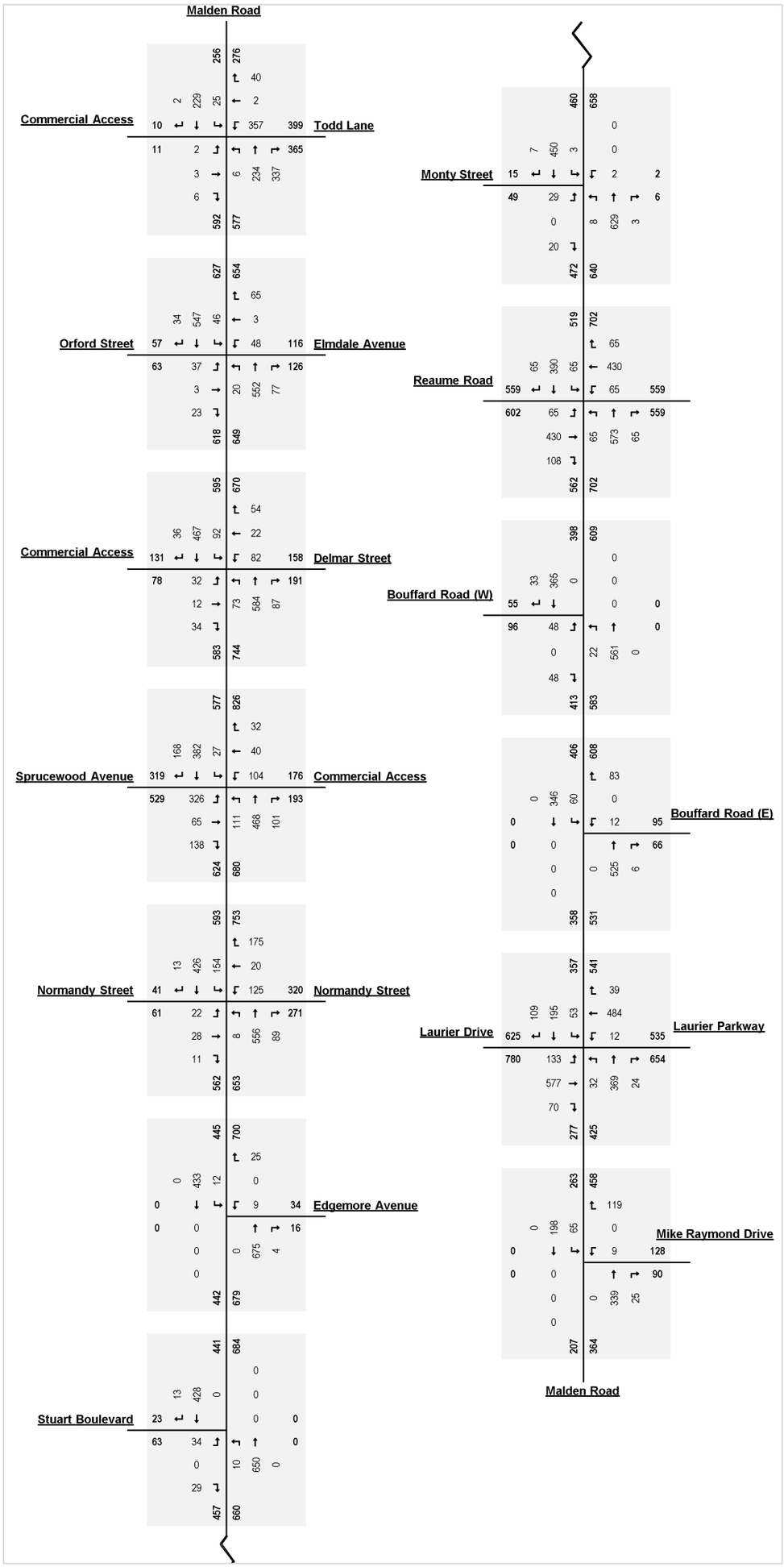


Figure 36: Future (2041) Improved Alternative with Three-Lane Cross-Section - AM Peak Hour Trips

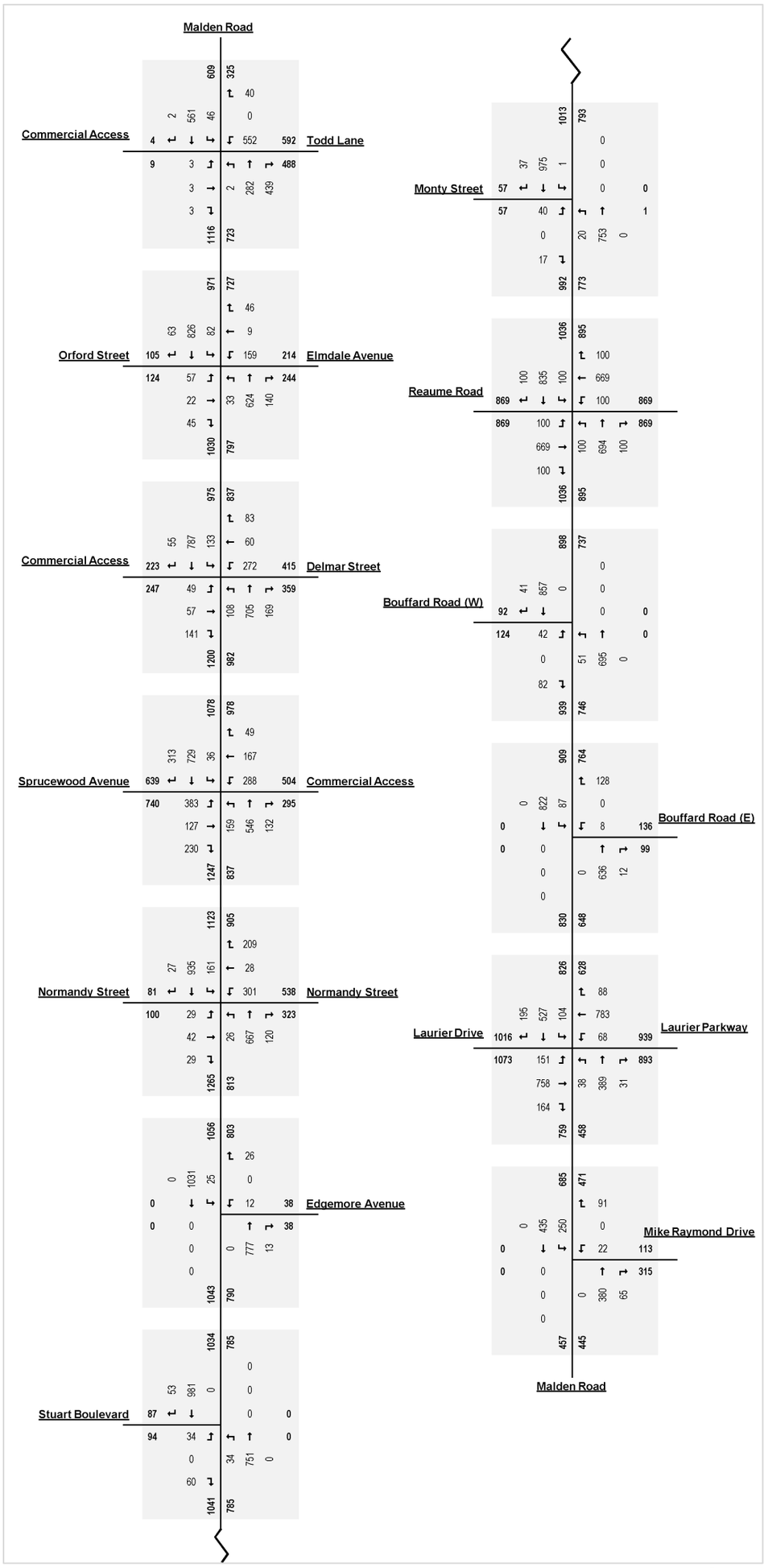


Figure 37: Future (2041) Improved Alternative with Three-Lane Cross-Section - PM Peak Hour Trips

Table 22: Improved Alternative with Three-Lane Cross-Section | Intersection Level-of-Service Analysis | Peak Hour

Intersection	Movement	AM Peak Hour				AM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q	LOS	Delay	v/c	Q	
Malden Road & Todd Lane *(Roundabout)*	EB	C	21	0.68	2.5	F	140	1.03	25.4	-
	WB	B	14	0.48	1.1	F	652	1.31	99.1	-
	NB	A	8	0.03	0	B	12	0.03	0	-
	SB	E	38	0.86	6.3	F	190	1.09	44.1	-
Malden Road & Orford Street/Elmdale Avenue *(Signalized)*	EBL	B	15	0.09	11	B	19	0.15	17	30
	EBT	B	14	0.02	6	B	18	0.07	12	-
	WBL	B	15	0.10	14	C	22	0.37	41	12
	WBT	B	14	0.06	9	B	18	0.06	10	-
	NBL	B	4	0.06	m0.7	A	7	0.15	m1.7	66
	NBT	B	17	0.82	29	B	16	0.83	24	-
	NBR	B	1	0.06	0	A	3	0.11	m1.2	-
	SBL	B	18	0.28	10	C	24	0.49	20	88
	SBT	B	16	0.45	35	B	17	0.62	59	-
	Intersection	***B***	***15***	***0.47***		***B***	***16***	***0.63***		-
Malden Road & Delmar Street *(Signalized)*	EBL	B	17	0.07	10	C	20	0.13	16	20
	EBT	B	16	0.05	8	C	22	0.24	29	-
	WBL	B	19	0.21	21	E	72	0.97	#108.3	45
	WBT	B	17	0.08	12	C	21	0.19	26	-
	NBL	B	13	0.22	m4.7	B	14	0.44	m4.3	23
	NBT	C	22	0.69	65	C	23	0.78	m67.6	-
	SBL	B	18	0.34	13	C	30	0.57	19	23
	SBT	C	20	0.52	27	C	24	0.77	45	-
	Intersection	***B***	***20***	***0.43***		***C***	***28***	***0.84***		-
Malden Road & Sprucewood Avenue *(Signalized)*	EBL	D	39	0.82	#75.1	F	130	1.17	#129.9	105
	EBT	C	27	0.33	30	E	57	0.88	#97.1	-
	WBL	C	22	0.33	21	F	294	1.54	#104.6	50
	WBT	C	24	0.10	13	C	31	0.43	44	-
	WBR	C	23	0.02	0	C	25	0.04	0	50
	NBL	C	20	0.40	m15.9	E	71	0.90	m#34.6	-
	NBT	C	25	0.58	45	C	22	0.62	49	21
	SBL	B	15	0.09	m6.6	B	15	0.13	m5.1	-
	SBT	C	31	0.58	60	E	67	1.04	m#100.9	21
	Intersection	***C***	***28***	***0.67***		***F***	***82***	***1.23***		-
Malden Road & Normandy Street *(Signalized)*	EBL	B	14	0.06	6	B	17	0.10	8	30
	EBT	B	14	0.05	9	B	17	0.10	13	-
	WBL	C	23	0.38	35	F	104	1.08	#117.2	33
	WBT	B	20	0.18	17	C	24	0.23	21	-

Intersection	Movement	AM Peak Hour				AM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q	LOS	Delay	v/c	Q	
	NBL	B	16	0.03	3	B	19	0.16	6	24
	NBT	C	33	0.79	66	C	33	0.82	84	-
	SBL	D	41	0.75	#38.3	C	29	0.86	m15.2	22
	SBT	B	19	0.56	34	D	52	1.05	m64.3	-
	Intersection	***D***	***44***	***0.74***		***F***	***101***	***1.13***		-
Malden Road & Reaume Road *(Signalized)*	EBL	D	45	0.56	24	E	57	0.80	#37.8	35
	EBT	E	67	0.88	167	F	222	1.38	#274.8	-
	EBR	D	41	0.16	23	C	29	0.09	13	30
	WBL	D	43	0.52	24	D	45	0.72	#33.5	35
	WBT	E	68	0.89	169	F	222	1.38	#274.8	-
	WBR	D	39	0.04	10	C	29	0.07	13	25
	NBL	B	17	0.18	18	E	65	0.86	#41.9	35
	NBT	C	33	0.71	200	D	54	0.97	#231.8	-
	RBR	B	18	0.04	7	B	16	0.07	10	30
	SBL	C	20	0.23	17	C	31	0.66	#23.8	35
	SBT	C	26	0.49	119	F	121	1.17	#304.7	-
	SBR	B	18	0.06	8	B	17	0.09	10	30
	Intersection	***D***	***44***	***0.74***		F	126	1.20	-	-
Malden Road & Bouffard Road *(Signalized)*	EBL	D	42	0.46	19	D	41	0.42	17	25
	EBT	D	38	0.03	0	D	41	0.50	27	-
	WBL	A	2	0.03	2	D	38	0.08	6	-
	WBT	A	4	0.44	48	D	40	0.36	21	-
	NBL	A	3	0.32	29	A	3	0.15	5	25
	NBT	B	17	0.37	27	A	5	0.56	72	-
	SBL	D	54	0.95	#248.8	A	2	0.11	5	-
	SBT	B	18	0.05	4	A	7	0.72	128	-
	Intersection	***A***	***7***	***0.44***		***A***	***10***	***0.69***	***-***	-
Malden Road & Laurier Drive/ Laurier Parkway *(Signalized)*	EBL	B	17	0.37	27	D	40	0.75	#45.1	20
	EBT	D	54	0.95	#248.8	F	284	1.52	#372.5	-
	EBR	B	18	0.05	4	C	30	0.23	32	25
	WBL	C	22	0.08	4	D	36	0.54	20	46
	WBT	C	25	0.45	60	D	55	0.92	#145.8	-
	WBR	C	20	0.03	0	C	30	0.08	11	46
	NBL	C	28	0.11	13	C	27	0.25	12	45
	NBT	E	58	0.86	#172.9	D	43	0.74	143	-
	SBL	C	30	0.34	19	C	26	0.46	28	81
	SBT	D	36	0.41	70	D	55	0.89	#211.2	-
	SBR	C	30	0.09	15	C	29	0.27	38	46

Future (2041) Traffic Conditions
October 15, 2021

Intersection	Movement	AM Peak Hour				AM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q	LOS	Delay	v/c	Q	
	Intersection	***D***	***40***	***0.87***	***-***	***F***	***100***	***1.14***	***0***	***-***
Malden Road & Edgemore Avenue *(Un-signalized)*	WBLR	C	15	0.10	3	C	20	0.16	4	-
	SBL	A	9	0.02	-	A	10	0.04	1	-
Malden Road & Stuart Boulevard *(Un-signalized)*	EBLR	B	15	0.16	4	D	35	0.47	18	-
	NBL	A	9	0.01	-	B	12	0.07	2	-
Malden Road & Monty Street *(Un-signalized)*	EBLR	B	14	0.12	3	D	27	0.28	8	-
	NBL	A	8	0.01	0	B	11	0.03	1	-
Malden Road & Mike Raymond Drive *(Un-signalized)*	WBR	B	12	0.02	0	C	22	0.10	2	-
	WBR	B	12	0.20	6	B	12	0.16	4	-
	SBL	A	8	0.06	2	A	10	0.25	8	-

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

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

5.3.5 Improved Alternative with Four-Lane Cross-Section

The road network for the final scenario is shown in **Figure 38**. This alternative uses the same traffic volumes, intersection, and access management recommendations from the previous scenario (**Figure 36** and **Figure 37**), but also includes a widened Malden Road to a four-lane cross-section to understand how traffic would operate with additional north-south roadway capacity. The trade-off with this scenario is that due to the widened roadway it is not possible to provide on-street bike lanes. As a result, cycling facilities would be provided in the form of a shared multi-use path on the east side of the road.

Based on the analysis of the three-lane cross-section alternative, it was identified that operational and capacity constraints would primarily be confined to the PM Peak hour, thus the four-lane cross-section alternative was evaluated for the PM Peak hour. Operational results are based on the conservative 2% growth rate, along with the best-case scenario of trip diversion due to Reaume Road and Diotte Street extensions (scenario five of the volume distribution sensitivity analysis).

Roadway Operations

PM peak hour operations are shown below in **Table 23,** focusing on the time of day with the greatest traffic constraints. Only the intersections that experienced a change in operations from the previous scenario are shown in the operational results since many intersection operations stayed the same.

In comparison to the scenario without a four-lane cross-section, most signalized intersections remain the same as these intersections previously had auxiliary left and right turn lanes that would now operate as full lanes in this scenario. The intersection of Reaume Road saw improvements in capacity and delays and no longer operates at a LOS ‘F’. At the intersection of Malden Road and Laurier Parkway, operations stay the same for most movements and only the eastbound through movement experiences a LOS ‘F’ and v/c above 1.00. East-west left turns at unsignalized intersections worsen because vehicles making left-turn movements onto Malden Road must now cross two lanes of live traffic instead of one, requiring additional gap time.

Although many intersection operations show improvements in this scenario, greater land impacts are required to construct a four-lane cross-section. In addition, the widening would preclude the possibility of adding on-street cycling facilities which would work against the sustainability goals of the Town. The result of having a lower-quality shared multi-use pathway on the east side of the road would likely have fewer positive benefits for active and sustainable transportation options. It is expected that freeing up roadway capacity for motorists would attract more vehicles onto Malden Road until capacity is reached once again, which is less favourable than shifting travel behaviour to alternate modes by balancing street space for walking, cycling and public transit users.



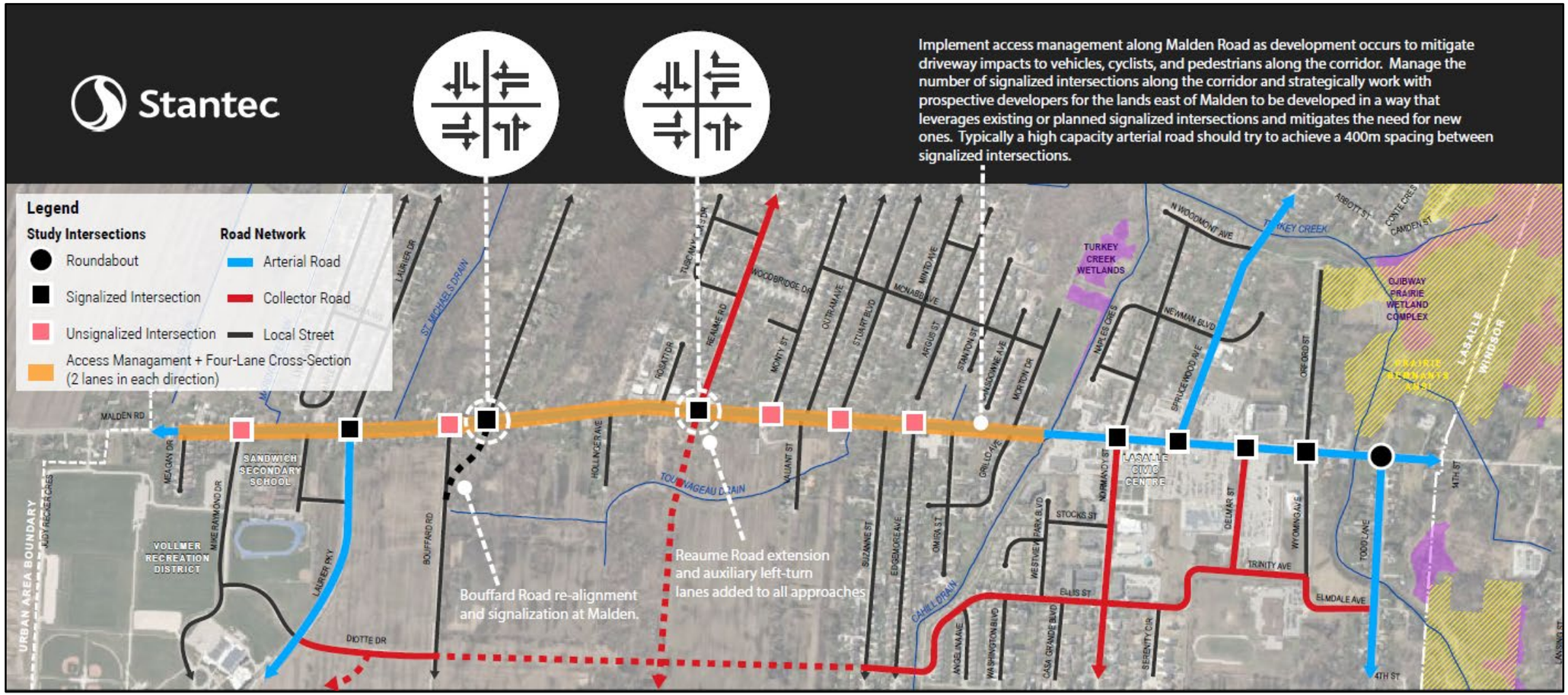


Figure 38: Improved Alternative 2041 Road Network with Four-Lane Cross-Section

Table 23: Improved Alternative with Four-Lane Cross-Section | Intersection Level-of-Service Analysis | PM Peak Hour

Intersection	Movement	PM Peak Hour				Available Storage length (m)
		LOS	Delay	v/c	Q	
Malden Road & Reaume Road *(Signalized)*	EBL	D	47	0.77	37	35
	EBT	E	56	0.96	223	-
	EBR	C	21	0.09	12	30
	WBL	D	40	0.72	34	35
	WBT	E	57	0.97	224	-
	WBR	C	21	0.08	12	30
	NBL	D	45	0.76	40	35
	NBT	D	38	0.78	110	-
	SBL	C	25	0.53	25	35
	SBT	D	53	0.95	152	-
	Intersection	***D***	***48***	***0.94***		***-***
Malden Road & Laurier Drive/ Laurier Parkway *(Signalized)*	EBL	D	40	0.75	45	50
	EBT	F	283	1.51	372	-
	EBR	C	30	0.23	32	25
	WBL	D	36	0.54	20	46
	WBT	D	55	0.92	146	-
	WBR	C	30	0.08	11	46
	NBL	C	28	0.25	12	-
	NBT	D	43	0.74	143	-
	SBL	C	26	0.46	28	81
	SBT	E	55	0.89	211	-
	SBR	C	28	0.20	24	-
	Intersection	***F***	***100***	***1.14***		***-***
Malden Road & Edgemore Avenue *(Un-signalized)*	WBLR	F	70	0.46	15	-
	SBL	A	10	0.04	1	-
Malden Road & Stuart Boulevard *(Un-signalized)*	EBLR	F	715	2.17	83	-
	NBL	B	12	0.07	2	-
Malden Road & Monty Street *(Un-signalized)*	EBLR	F	1244	2.93	62	-
	NBL	B	11	0.03	1	-
Malden Road & Mike Raymond Drive *(Un-signalized)*	WBR	F	65	0.28	8	-
	WBR	B	11	0.13	4	-
	SBL	A	10	0.25	8	-

Active Transportation Operation Considerations:

Most of the same active transportation improvements and assumptions from the three-lane cross-section alternative apply to this scenario except the on-road bike lanes along Malden Road. With a four-lane road cross-section this would eliminate the possibility of incorporating on-street cycling facilities due to lack of space within the right-of-way. To accommodate cycling, a shared multi-use path would be provided on the east side of the roadway.

Considering the Town's desire to support denser mixed-use developments along the corridor, a shared multi-use pathway may not be suitable. Mixed-use developments are typically associated with higher pedestrian and cycling volumes which may create undesirable conflicts between cyclists and pedestrians if they are required to share a pathway. It may also inconvenience cyclists as all trips along the corridor looking to access a property on the west side of the road will be required to cross the street. Considering the limited crossing opportunities along the corridor this would either require cyclists to make large deviations to cross the street, or illegally cross the street directly to access a property. This option provides enhanced vehicular operations at the expense of providing limited active transportation improvements along the corridor.

5.4 Roadway Operations Conclusions

The roadway operational analysis identified that both the three-lane cross-section and four-lane cross-section alternatives can generally satisfy the demand along the corridor. The distinction is that the four-lane cross-section alternative would provide enhanced vehicular operations at the expense of active transportation circulation, while the three-lane cross-section alternative would provide roadway enhancements with some constrained movements in order to accommodate enhanced active transportation solutions along the corridor. Both options are viable from a traffic operations perspective and should be carried forward for further feasibility evaluation within subsequent phases of this EA Addendum.



6.0 Active Transportation Alternatives

As part of this Environmental Assessment addendum, there is an opportunity to evaluate and update active transportation recommendations to support the Malden Road corridor's growth into the future.

6.1 Complete Streets Considerations

The Town of LaSalle has expressed the requirement for Malden Road to encourage complete streets. Complete Streets is an approach whereby streets are designed to be safe for everyone: people who walk, bicycle, take transit, or drive, and people of all ages and abilities as shown in **Figure 39**. This ensures that transportation is planned and designed for all road users, not only motorists. There is no singular approach to Complete Streets, however, it acknowledges that a delicate balance needs to be struck between different road users and stakeholders regarding how transportation infrastructure is disseminated. The link between Complete Streets and public health is well documented as it enhances human and environmental health by providing an environment that enables and encourages active transportation.

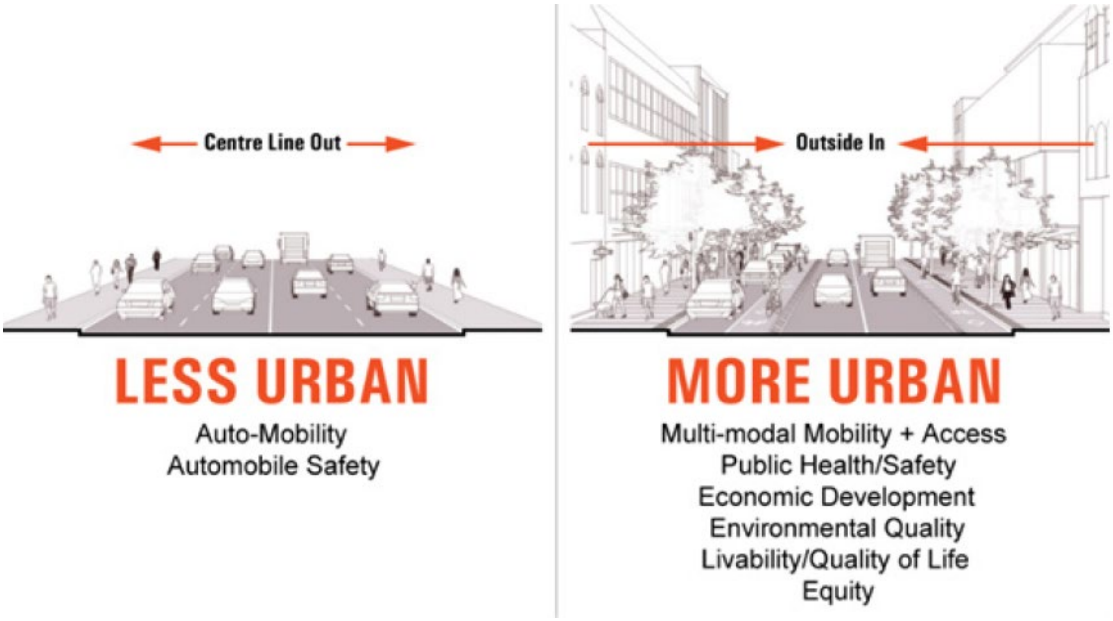


Figure 39: Complete Streets Philosophy - per City of Toronto Complete Streets Guidelines

The traffic assessment of the four-lane cross-section alternative provides roadway improvements that make traffic operations better; however, based on Complete Streets principles, Malden Road's design must not solely consider cars and must instead balance transportation for all road users. Creating roadway conditions that favour motorists and provide cars with the highest level of service will attract more vehicular traffic to the roadway, thus working against the sustainability goals set out in County and municipal planning documents. Induced demand is the concept that providing increased roadway capacity will encourage demand to grow until capacity is reached once again. This is a result of an initial boost in operations and capacity when the widening is first implemented thus making driving a more convenient mode for travel along the corridor initially, which would further encourage more people to choose driving. Consequently, increasing the capacity of a roadway for vehicles often produces the opportunity for the same traffic delays to return while providing limited enhancements for other road users such as pedestrians, cyclists, and transit riders.

The impacts of favouring vehicular movement over a balanced approach between various modes of mobility also impacts land uses. Encouraging and supporting sustainable modes of transportation provide the opportunity for residents to shift away from driving as their primary mode of transportation which in turn can work towards supporting denser, mixed-use developments that aren't built with an oversupply of parking. Providing parking on-site is one of the most expensive components of a development, the costs of which are passed onto consumers. Supporting sustainable modes of transportation could mitigate the need for more costly parking which may work towards encouraging developments that provide more options for residents who don't want to pay for or need a parking space, resulting in lower costs and more livable space within developments rather than parking lots.

To achieve a complete street, it requires balancing space within the road right-of-way equitably between the various modes that use the corridor. For instance, it may be beneficial to accept some deteriorated roadway operations at a few movements to allow for the implementation of facilities that can be used by active and sustainable modes of travel (walking, cycling and transit) to provide more choice and freedom of mobility for residents. Complete Streets encourages building streets that are attractive to users of these modes rather than building streets that prioritize, and are only attractive to, motorists. Active transportation opportunities are explored below in effort to help transform Malden Road into a Complete Street that balances all users.

6.2 Previously Planned Active Transportation Improvements

As summarised in **Section 2.6** of this report, the County Wide Active Transportation System (CWATS) for County of Essex, and the on-going Town of LaSalle Transportation Master Plan identify Malden Road as an active transportation corridor to support emerging growth areas, particularly east of Malden Road, however no specific design solution was identified.

On-road bike lanes were proposed for the entirety of the Malden Road study area within the 2008 EA; however, these facilities have not yet been implemented. Between Todd Lane and the Cahill Drain, bike lanes were unable to be accommodated within the right-of-way when this section of roadway was being expanded in 2011. As a result, the roadway currently operates with a shared roadway cycling facility (sharrow) in this section, and then a disjointed in-boulevard multi-use pathway south of Normandy Street on the east side of the roadway.

Considering the anticipated vehicular volumes that will reach up to 1,200 vehicles in the peak direction by 2041, the existing sharrow that is provided between Todd Lane and Normandy Street, and the previously recommended sharrows south of Normandy Street for the remainder of the corridors are likely to present safety and operational challenges for cyclists and motorists. The southbound through movements are approaching capacity, and the presence of cyclists may restrict the capacity on this section of roadway since cyclists generally travel between 10-20 km/h requiring motorists to change lanes to pass a cyclist. Furthermore, existing field observations have identified that a portion of cyclists along Malden Road already prefer to travel along the sidewalk instead of sharing the roadway, likely due to high volumes of traffic that may intimidate novice cyclists. With the advent of new residential neighbourhoods along Malden Road it will be important to consider a context-sensitive approach to this portion of Malden Road that generally aims to address the following:

- Enhance Cyclist and Pedestrian Safety;
- Improve Active Transportation Network Connections across Malden Road as well as between emerging neighbourhoods;
- Provide continuous, consistent cycling and pedestrian facilities along the Malden Road corridor; and
- Encourage increased pedestrian and cycling facility usage.

6.3 Constraints & Opportunities

Through operational analysis in Sec**tions 3.0** and **5.0**, it was identified that there is currently a significant volume of traffic along Malden Road, particularly between Normandy Street and Todd Lane in the northern section of the study limits. This is anticipated to increase into the future 2041 horizon year to reach between 800-1,300 vehicles in the AM and PM peak hours, respectively representing 18-24% growth over existing levels. A summary of the corridor constraints and opportunities are visualized in **Figure 40**.

Constraints

- Right-of-way space constraints between Normandy Street and Todd Lane: Limited opportunities for expanding the existing roadway between Normandy Street and Todd Lane to accommodate dedicated on-street cycling facilities;

- Limited Protected Crossing Opportunities: Existing distance between protected active transportation crossing opportunities is ~1 km between Laurier Parkway and Normandy Street with only one protected crossing opportunity between these streets via an unsignalized pedestrian crosswalk at Reaume Road. According to the University of Toronto's Transportation Tomorrow Travel Demand Survey data, typically, pedestrian and cyclist trips in suburban environments are made for trips between 1-3 km in length. The existing crossing opportunities potentially add up to 1 Km in distance to AT trips further diminishing the pedestrian and cycling experience for east-west movement. The impacts of long distances between pedestrian crossings also impact transit riders as every transit trip begins and ends with a walk. As a result, the large crossing spacing adds significant time and distance for transit riders looking to access transit on both sides of the road. In contrast, the section between Normandy Street and Todd Lane has a denser number of intersections allowing improved permeability for pedestrians with average intersection spacings of 180m;
- Disconnected east-west connections: The existing Cahill Drain trail is disconnected between the east and west sides of Malden Road presenting a discontinuous network and experience for pedestrians and cyclists;
- Inconsistent and Discontinuous facilities: There are inconsistent pedestrian and cycling facilities along Malden Road where certain portions have sidewalks, while others only have an in-boulevard multi-use path on the east side of the roadway. This is compounded for cyclists who are currently served by an off-road multi-use path on the east side of the road for the bulk of the corridor, but then are forced onto a shared roadway facility north of Normandy Street.

Opportunities

- Opportunity for increased protected Active Transportation crossings in conjunction with planned/recommended intersection signalizations: The Reaume Road extension and Bouffard Road will add new intersection connections to Malden Road. The Improved Alternative Scenario intersection recommendations include signalizing Reaume Road and Bouffard Road which should also include considerations for pedestrian and cyclist facilities. This would reduce the average protected crossing distance between Normandy Street and Laurier Parkway down to ~600 m compared to 1 km today. In the short-term, there may be opportunities to enhance the existing pedestrian crosswalk at Reaume Road to one with additional visual features such as flashing beacons to further notify motorists about potential pedestrians crossing;
- Opportunity to connect the east and west sides of the Cahill Drain trail: There is an opportunity to connect the east and west sides of the Cahill Drain trail at Malden Road just south of Normandy Street. The benefits of this connection would further enhance the active transportation east-west permeability, as well as provide a safe alternate route for cyclists to loop around the existing signed route portion of Malden Road between Normandy Street and Todd Lane;

- Opportunity to enhance North-South cycling facilities along Malden Road: There is an opportunity to incorporate on-street bike lanes or cycle tracks as part of the Improved Alternative Scenario recommendation to widen Malden Road south of Normandy Street, and there is an opportunity to convert the existing sidewalk on the east side of Malden Road between Normandy Street and Todd Lane to a bi-directional multi-use path to provide a safer alternative for cyclists, separated from traffic, that can also accommodate pedestrians;
- Opportunity to provide connections to parallel North-South cycling facilities: The shared roadway portion of Malden Road (between Todd Lane and Normandy Street) can be daunting for vulnerable road users, particularly novice cyclists. There are opportunities to enhance east-west cycling connections to parallel north-south streets such as Ellis Street, and Newman Boulevard to provide a safer, more protected alternative to Malden Road between Normandy Street and Todd Lane. These connections would also provide broader network connections to support emerging residential neighbourhoods east of Malden Road.

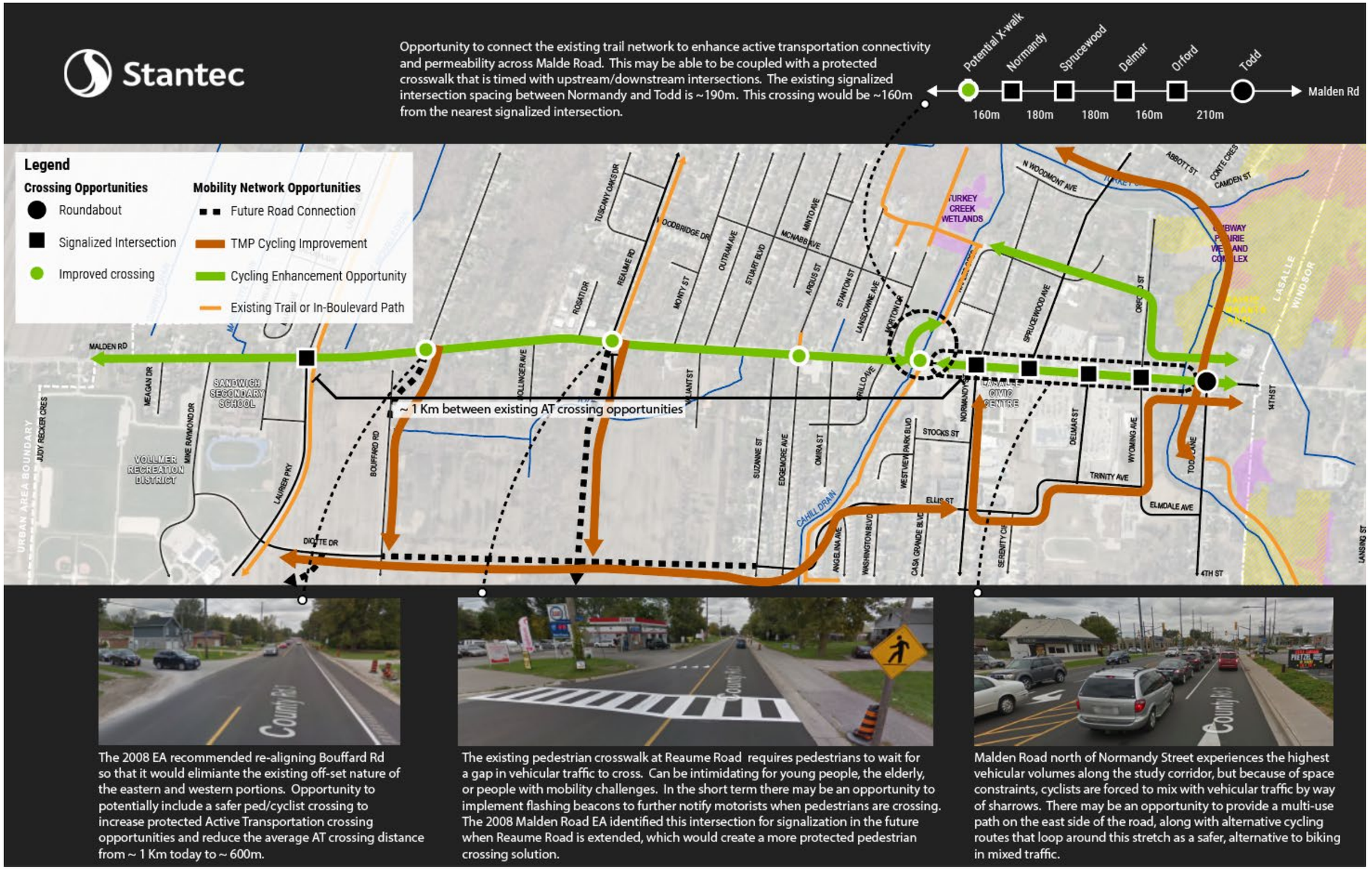


Figure 40: Existing Active Transportation Constraints & Opportunities

6.4 Active Transportation Facility Selection

Research shows that one of the most effective measures for improving overall cyclist safety within a road network is increasing the number of cyclists using the system. However, in order to encourage cyclists of different ages and abilities, a variety of bicycle facilities with different degrees of separation between motorists and cyclists must be available. Separation of cyclists and motor vehicles becomes increasingly more important as traffic volumes and operating speeds increase, and on corridors with a high propensity for conflicts. The selection of active transportation facility type focuses around:

- Vehicular speed;
- Vehicular volume;
- Number of accesses onto the roadway; and
- Availability of on-street parking.

Bicycle facilities provide various levels of separation between cyclists and motorists. These range from shared travel lanes with no separation but with the option to provide sharrow markings, to bicycle lanes with a painted buffer or physical barrier such as a cycle track. Other alternatives are in-boulevard bicycle facilities within the right-of-way, or off-road multi-use pathways outside of the corridor right-of-way.

A direct comparison of the relative safety of different types of bicycle facilities and degrees of separation is difficult. A bicycle facility with greater separation may appear to be 'safer' but may result in more conflicts at intersections and driveways, especially if the separation makes the cyclist less visible to the motorist. The overarching cycling facility selection process outlined in the *Ontario Traffic Manual (OTM) Book 18: Cycling Facilities* follows a three-step process:

- Step 1: Facility Pre-Selection: Pre-select an appropriate type based on vehicular volume and speed using the OTM Book 18 Nomograph as shown in **Figure 41**.
- Step 2: Consider Corridor Specific Characteristics: Consider design characteristics such as visibility of cyclists, number of driveway accesses and whether on-street parking is provided.; and
- Step 3: Justify Decision and Identify Design Enhancements: Document the rationale by way of this Environmental Assessment.

The methodology outlined in OTM book 18 was employed to determine the suitable facility for the study area corridor. This involved collecting and reviewing existing and future average annual daily traffic (AADT) volumes and 85th percentile motor vehicular operating speeds on the section of the corridor. The speed and AADT values are plotted on to the cycling facility selection Nomograph from OTM Book 18 to identify a preliminary facility type selection. Bicycle facility type are identified in terms of shared space, Designated space, or a Separated facility. In the absence of 85th percentile speeds, the design speed (an operating speed of 10kmph greater than the posted

speed limit) was used. The future AADT values were obtained from the predicted peak hour volumes on the highest volume section of Malden Road. The result of this analysis is summarised in **Table 24** highlighting the recommendation to have a designated or separated cycling facility along Malden Road. There are generally three different types of cycling facilities that could satisfy this including: dedicated on-street bike lane, cycle tracks, or in-boulevard multi-path.

Table 24: Bicycle facility selection

Road	2019 AM PHV	2019 PM PHV	2041 AM PHV	2041 PM PHV	2041 Traffic Volume (AADT)	Speed	Calculated Type
Malden Road	687	1,037	814 (+18%)	1,291 (+24%)	8,420	60kmph	Designated Facility / Separated Facility

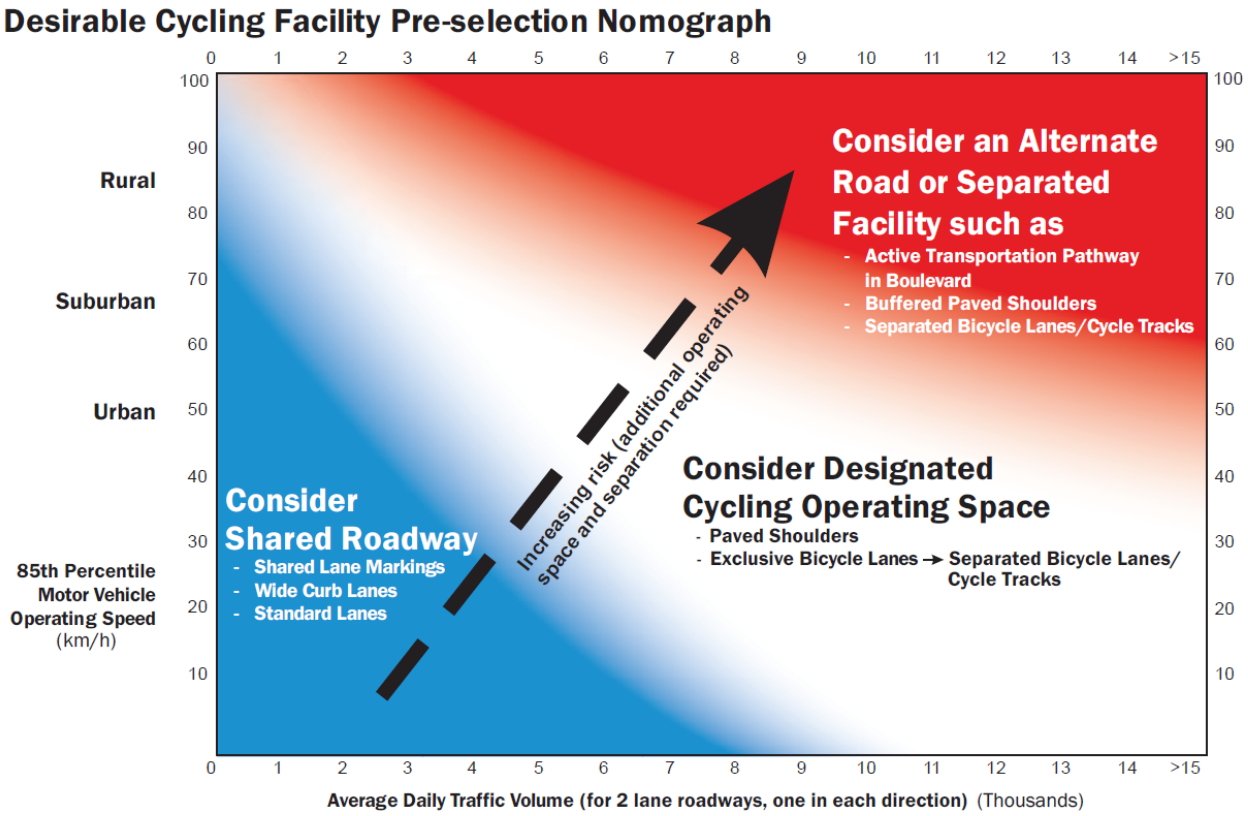


Figure 41: Cycling Facility Selection Nomograph from OTM Book 18

Though the OTM Book 18 provides a tool for bicycle facility selection it has to be treated as a guideline to complement engineering judgement. It is essential that the design considerations are reviewed based on site-specific conditions and application heuristics. The Malden Road corridor between Todd Lane and Laurier Parkway changes considerably between the commercial district between Todd Lane and Normandy Street which has an existing roadway width of approximately 18m accommodating two lanes in both directions and a median/centre-two-way-turning lane. The challenges with this stretch of Malden Road is the presence of Hydro poles on the west side of the road that present a significant constraint to any widening of on-road facilities to accommodate a dedicated bike facility. There are currently sharrows on the roadway in this section indicating that cyclists should proceed in mixed traffic, however in practice few cyclists use this portion of Malden Road. A summary of observed bicycle counts along Malden Road during the summer is presented in **Table 25**. The highest number of cyclists was observed to be 14 during the afternoon peak hour at Normandy Street which acts as a sort of gateway to the town centre.

Table 25: Existing Weekday Peak Hour Bicycle Counts along Malden Road (Aug 1, 2019)

Intersection Name	AM			PM		
	NB	SB	Total	NB	SB	Total
Malden Road & Todd Lane	2	2	4	1	5	6
Malden Road & Orford Street / Elmdale Avenue	2	1	3	4	4	8
Malden Road & Delmar Street	1	0	1	3	6	9
Malden Road & Sprucewood Avenue	2	3	5	1	6	7
Malden Road & Normandy Street	4	1	5	6	8	14
Malden Road & Edgemore Avenue	5	2	7	6	7	13
Malden Road & Stuart Boulevard	6	4	10	2	9	11
Malden Road & Monty Street	7	4	11	2	5	7
Malden Road & Reaume Road	3	4	7	0	6	6
Malden Road & Bouffard Road (West)	3	4	7	0	7	7
Malden Road & Bouffard Road (East)	2	2	4	0	8	8
Malden Road & Laurier Drive / Laurier Parkway	4	2	6	0	6	6
Malden Road & Mike Raymond Drive	0	8	8	1	6	7

More importantly these trends point toward Malden Road's role within the community where it serves several different road users and functions. We also note that the number of cyclists counted along Malden Road between Todd Lane and Normandy Street was generally lower than south of Normandy Street in the morning, likely due to the commercial land uses having their peaks in the afternoon rather than the morning as visualized in **Figure 42**.

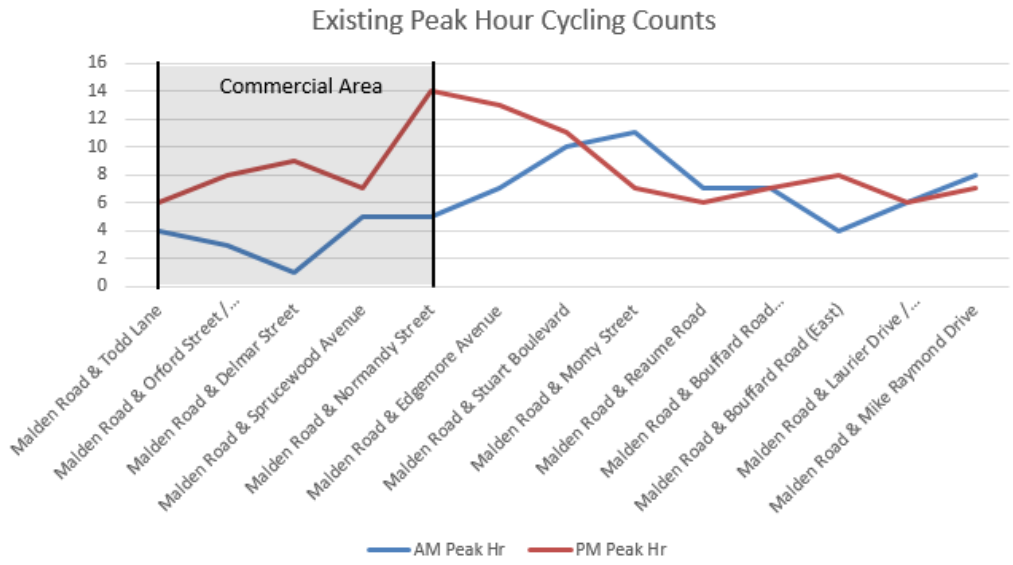


Figure 42: Existing Peak Hour Combined NB/SB Bicycle Counts by Segment

6.4.1 Active Transportation Alternatives

Based on our review of constraints and opportunities along the Malden Road corridor solutions were developed for two different sections of Malden Road characterized by the following:

- Todd Lane to the Cahill Drain
  - Physically constrained by hydro poles on the west side of the right-of-way. The roadway is already 2 lanes in each direction with a centre median/turning lane. Limited opportunities for improvements within the right-of-way, requires a network solution.

- The Cahill Drain to the southern study limits.
  - Has space available within the right-of-way to implement cycling facilities, requires an identification of which facility solution presents the best planning solution balancing several criteria.

These two sections are visualized in **Figure 43** below.



Figure 43: Active Transportation Improvement Sections

6.4.1.1 Malden Road | Todd Lane to the Cahill Drain

Due to the space constraints within the Malden Road corridor between Todd Lane and Normandy Street, there are limited options for improvement within the road right-of-way. As a result, the following are the recommended active transportation measures to enhance active transportation within this section as visualized in **Figure 44**:

- Dedicated bi-directional in-boulevard multi-use path on the east side of the roadway, replacing the existing sidewalk;
- Cahill Drain Trail connection to Malden Road from the existing terminus west of Malden Road;
- Dedicated pedestrian/cyclist crosswalk at Malden Road and the Cahill Drain to connect the existing eastern and western portions of the Cahill Drain Trail. This is further detailed and explained in the following section;

- New multi-use path one on side of Newman Boulevard between the existing Cahill Drain Trail north to Orford Street;
- Implement dedicated on-street cycling facilities on Orford Street/Elmdale Avenue between the Newman Boulevard Multi-use path in the west, and Todd Lane in the east;
- In alignment with the Town's TMP, provide dedicated on-street cycling facilities along Normandy Street, between Malden Road and Ellis Street;
- In alignment with the Town's TMP, provide dedicated on-street cycling facilities along Ellis Street/Trinity Avenue between Normandy Street and Elmdale Avenue;

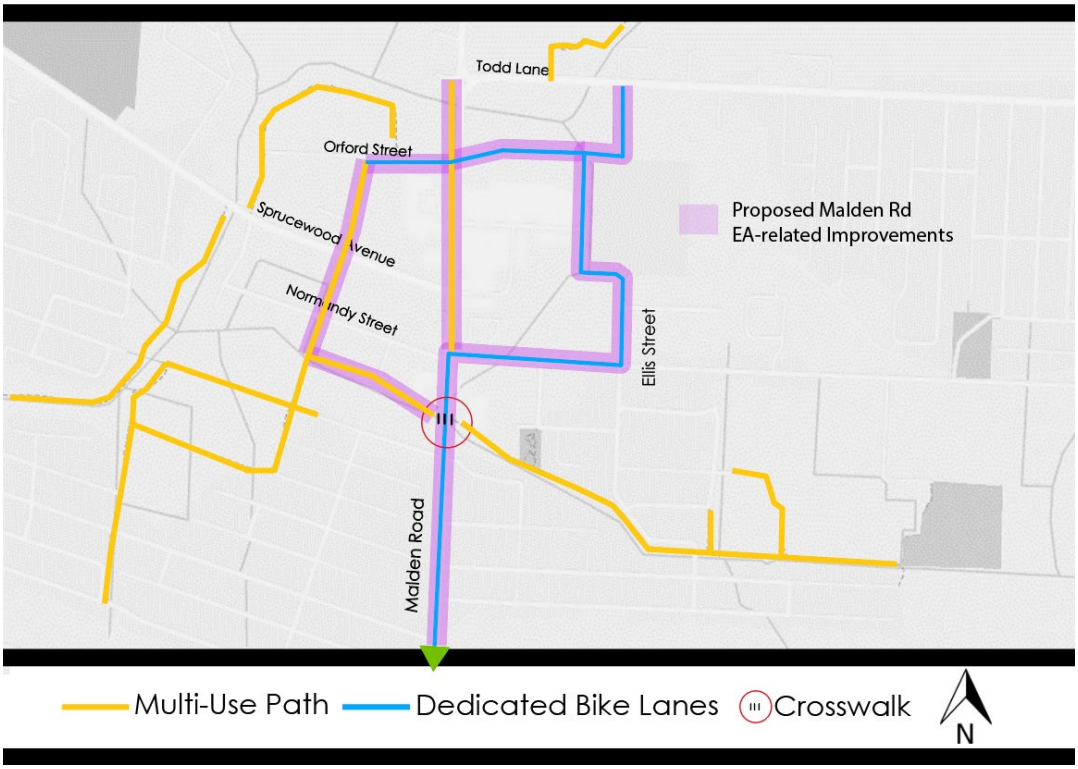


Figure 44: Recommended Active Transportation Improvements | Todd Lane to the Cahill Drain

Cahill Drain Crosswalk Treatment

To promote a more permeable active transportation network it is recommended that the existing Cahill Drain trail be connected on both sides of Malden Road via a dedicated crosswalk at Malden Road in alignment with the previously recommended solution from the 2009 EA. The benefits of this solution would create an enhanced transition area between the on-street bike lane facilities in the south portion of Malden Road, and the

bi-directional in-boulevard multi-use pathway on the east side of the road between Cahill Drain and Todd Lane. This would not only provide an alternative route to avoid the busy commercial core, but it will also enhance east-west travel as well and mitigate Malden Road's role as a barrier. The 2009 EA proposed providing a user-actuated crossing signal and pedestrian refuge to facilitate crossing Malden Road as visualized in **Figure 45**. This crossing would result in a reduced distance for pedestrians to travel to cross the road.

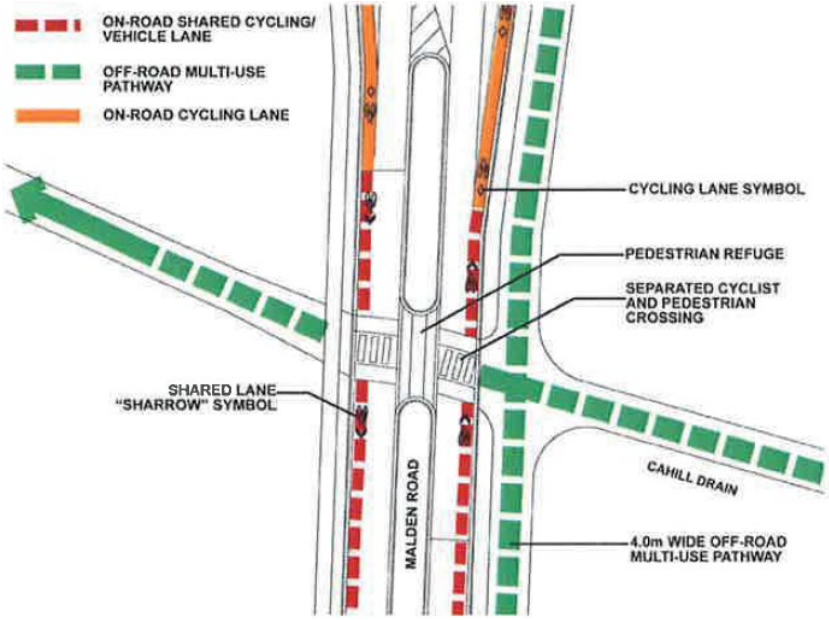
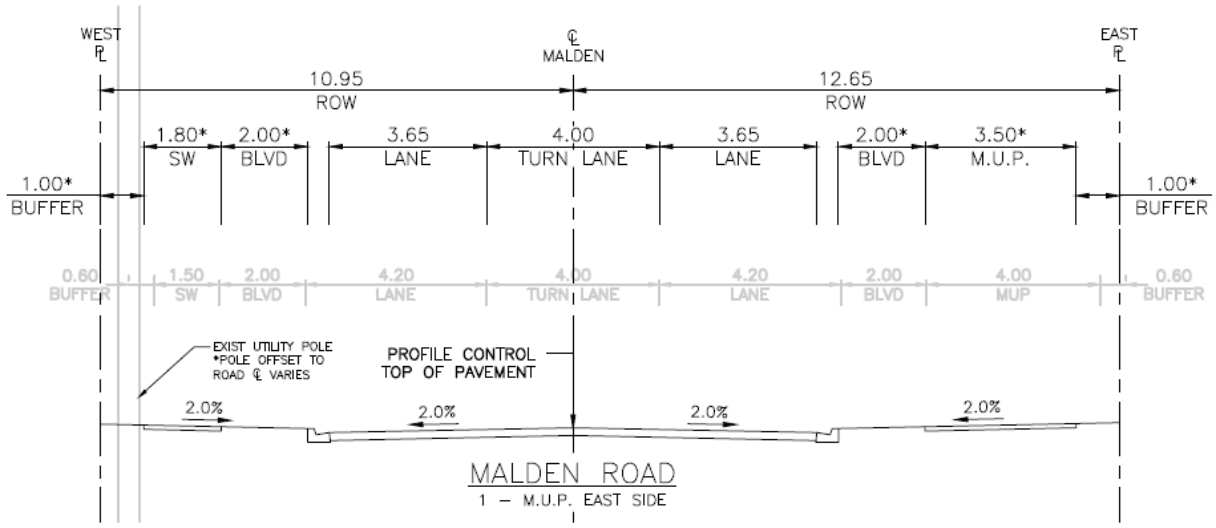


Figure 45: Previously proposed crosswalk treatment for the Cahill Drain trail
Source: Malden Road Class Environmental Assessment, 2009

6.4.1.2 Malden Road | The Cahill Drain to Southern Study Limits

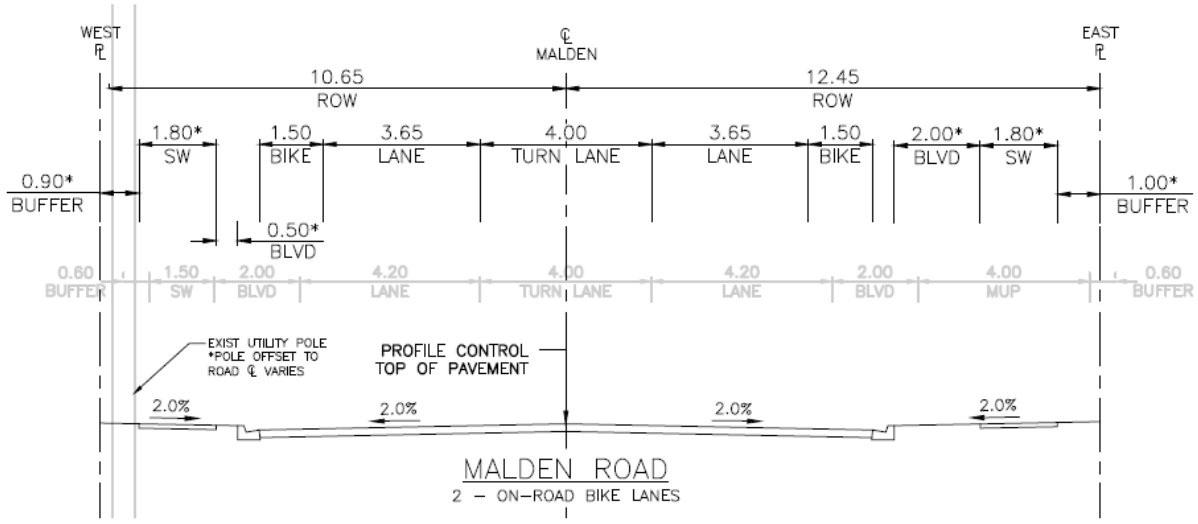
Based on a review of existing/future constraints and opportunities the following alternative solutions were developed for the southern portion of the Malden Road corridor between Normandy Street and the southern study limits:

Option 1: Enhanced Multi-Use Path on the east side of Malden Road;



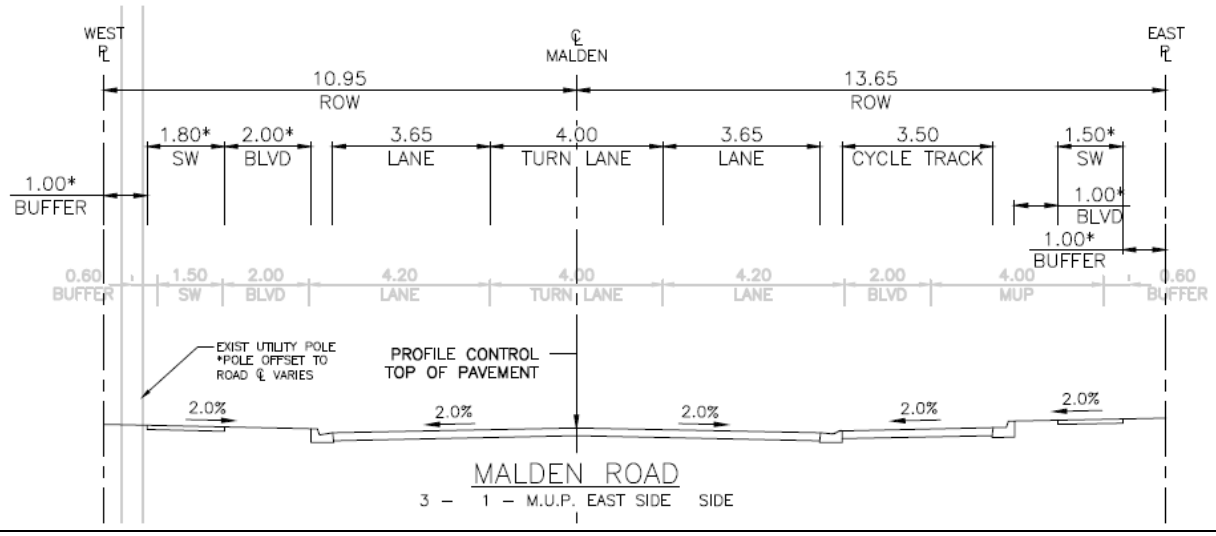
In-Boulevard Multi-Use path on the east side of the roadway. No cycling facility on the west side and no sidewalk on the east side.

Option 2: Dedicated on-street bike lanes;



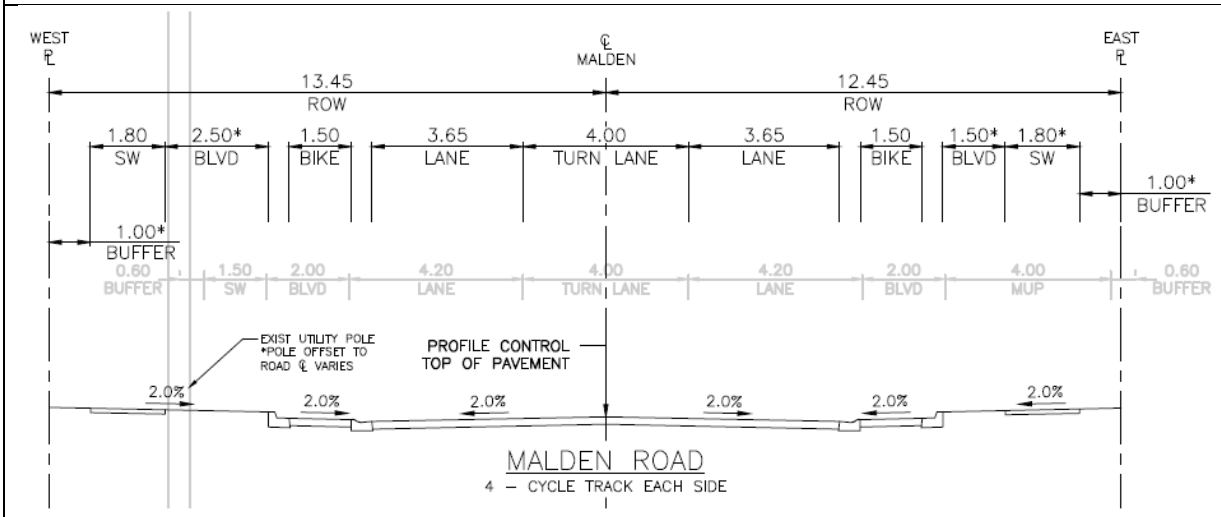
Includes a dedicated 1.5m on-street bike lane on both sides of the roadway with sidewalks on both sides of the road.

Option 3: Bi-Directional Cycle Track on the east side of Malden Road



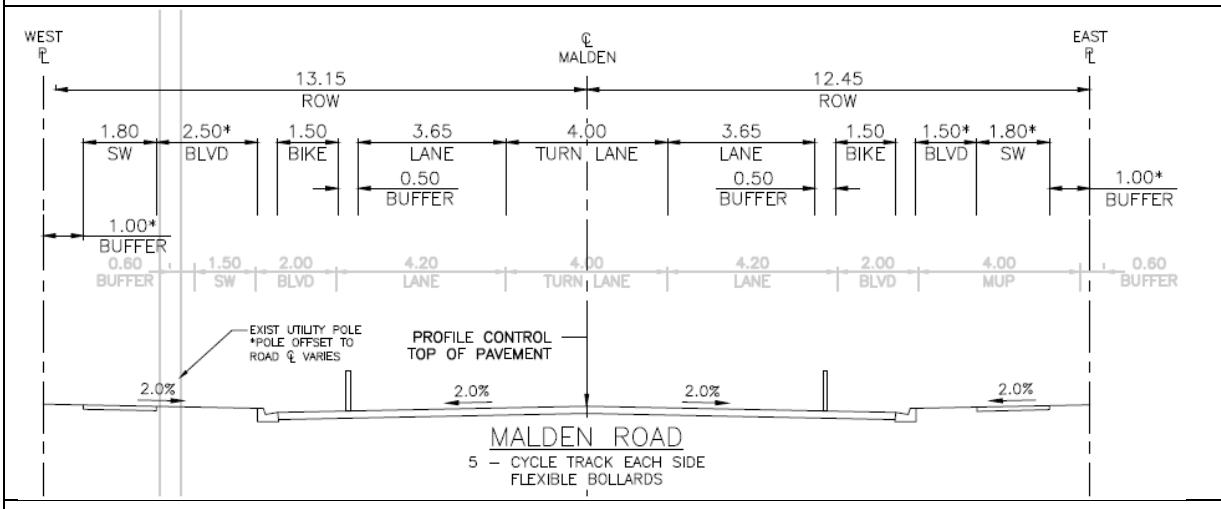
Includes a 3.5m bi-directional cycle track on the east side of the roadway, separated by a curb. Also includes sidewalks on both sides of the road.

Option 4: Dedicated In-boulevard Cycle Track on each side of the road



Includes a dedicated 1.5m cycle track on both sides of the road separated form vehicular traffic by a curb. Also includes a sidewalk on both sides of the road.

Option 5: Dedicated On-street bike lane with flex bollards on each side of the road



Includes a dedicated 1.5m cycle track on both sides of the road separated form vehicular traffic by a curb. Also includes a sidewalk on both sides of the road**.**

Evaluation of Active Transportation Alternatives

The five options presented above were evaluated from a planning perspective with the assumption being that this evaluation would be further informed through detailed design as part of the broader Environmental Study Report (ESR) Addendum for Malden Road. The rationale is that the design feasibility of the preferred option from a planning perspective would be further informed by detailed design to balance the planning-level analysis with feasibility analysis. The planning-level evaluation comprised the following high-level criteria:

- Roadway Operations:
  - The impact that each option has on roadway vehicular operations;
- Cyclist Safety:
  - Qualitative assessment of how much additional safety, over existing conditions, the proposed option would provide vulnerable road users;
- Active Encouragement:
  - How likely is the solution going to encourage active transportation usage;

Each of the options were weighted equally and evaluated based on a scale of one to three with one being the least favourable, two being neutral or similar to other options, and three being most favourable. The evaluation of options is summarised in **Table 26**. Based on this evaluation Options three, four and five are the preferred solutions from a planning-perspective, however Option one may also be a viable candidate depending on the feasibility and detailed costing of the options to be conducted through subsequent phases of this EA addendum.

It is recommended that Options one, three, four and five be carried forward for further evaluation through subsequent phases of this EA Addendum



Table 26: Evaluation of Alterative Active Transportation Options | Todd Lane to the Cahill Drain

Option	Roadway Operations		Cyclist Safety		Active Encouragement		Total Score
Option 1	Removes cyclists from the roadway so there is limited impact and roadway operations.	3	Separates cyclists from vehicles, enhancing cyclist safety, but may create additional conflicts with driveway accesses due to the bi-directional operation as well as conflicts with pedestrians as it is a shared pathway facility.	2	Provides a separated facility for cyclists, but it is a shared pathway between pedestrians and cyclists. It will further encourage active transportation usage over existing conditions but may create frustration for cyclists and pedestrians alike having to share one facility between both modes.	2	7
Option 2	Provides a dedicated on-road facility for cyclists mitigating their impact on roadway operations. Depending on snow-clearing standards or non-compliance for on-street curb stopping/parking, this could result in cyclists edging into vehicular lanes on occasion.	2	Separates cyclists from vehicles, however there are no physical protections or separation.	1	Provides a dedicated on-street facility for cyclists but has limited safety physical protections which may not encourage timid or novice cyclists.	1	4
Option 3	Removes cyclists from the roadway so there is limited impact and roadway operations.	3	Completely separates cyclists from vehicles and pedestrians, mitigating vehicular and pedestrian conflicts. Design measures would need to be implemented to mitigate driveway conflicts due to the bi-directional nature of the facility.	3	Provides a high-quality facility that is visual, provides elevated safety, and enhances the cycling experience by completely separating cyclists from vehicles and pedestrians.	3	9
Option 4	Removes cyclists from the roadway so there is limited impact and roadway operations.	3	Completely separates cyclists from vehicles and pedestrians, mitigating vehicular and pedestrian conflicts.	3	Provides a high-quality facility that is visual, provides elevated safety, and enhances the cycling experience by completely separating cyclists from vehicles and pedestrians.	3	9
Option 5	Provides a dedicated on-road facility for cyclists mitigating their impact on roadway operations. Depending on snow-clearing standards or non-compliance for on-street curb stopping/parking, this could result in cyclists edging into vehicular lanes on occasion.	2	Cyclists are not completely separated from the roadway, but the flex bollards provide a physical indication and barrier between the bike lane and vehicles enhancing safety.	2	Provides a dedicated on-street facility with some physical safety measures for cyclists but may still be intimidating for novice cyclists since flex bollards are more of a visual cue rather than a physical measure that will protect.	2	6

7.0 Conclusion

The conclusions of the transportation analysis in association with the Malden Road EA addendum are as follows:

- Future 2041 ‘Do Nothing” conditions will require roadway improvements to accommodate planned development and network growth in the future. The main constraints with the existing roadway configuration are the two-lane section of Malden Road south of Normandy Street that presents challenges for east-west movements trying to exit from minor roads. The high volume of north-south vehicular traffic along Malden Road presents few opportunities for vehicles to exit safely onto the roadway from a minor road leading to significant movement delays at east-west approaches. Furthermore, the existing configuration is characterized by a discontinuous network of active transportation facilities along the corridor that can be enhanced to encourage active transportation, enhance safety for vulnerable road users, and improve the permeability of the active transportation network.

- Future 2041 “Previously Planned” conditions alleviate many constraints along the corridor by implementing a three-lane cross section characterized by one general vehicle lane in each direction along with a continuous centre two-way left-turn lane in the centre. This provides a vehicular refuge for vehicles exiting minor roads and leads to enhanced intersection operations as a result. However, despite these improvements, there are still operationally constraints at the unsignalized intersection of Reaume Road on account of the roadway’s extension eastward to serve development lands east of Malden Road. East-west operations at this intersection are characterized by excessive delays that reach up to eight minutes in length. Beyond roadway improvements, the previously planned network was to include dedicated bike lanes on Malden Road between the Cahill Drain and Todd Lane. Since the development of the 2009 EA, this portion of roadway was widened in 2011 and was unable to implement on-street bike lanes due to right-of-way space constraints presented by hydro poles on the west side of the road. This resulted in the implementation of a shared-roadway facility (sharrow) in the portion of Malden Road which presents safety and operational concerns for both cyclists and motorists. Additionally, the previously planned recommendation of a shared roadway facility (sharrows) for Malden Road’s southern portions is likely to have minimal impact on further encouraging active transportation on account of the high volumes of vehicular traffic that are anticipated to reach up to 1,200 vehicles per peak hour in 2041. There are opportunities to enhance upon the previous recommendations to implement additional intersection improvements and enhanced active transportation facilities along the corridor.

- The “Improved alternative” built upon the previously planned recommendations was evaluated with the signalization of the intersection of Reaume and Malden Road and auxiliary lanes on Laurier Driver to handle the redirected North-South Traffic. The re-alignment of Bouffard Road to create a continuous east-west corridor across Malden Road and the accompanying signalization of the intersection also enhance east-west movement operations. Signalization of Reaume Road and redirection of some traffic to Laurier Drive showed significant operational improvements in comparison to the Previously Planned alternative. A few movements continue to operate with a “LOS F” but the estimated delays can mostly be accommodated within one cycle length.

- An “Improved alternative” with a four-lane configuration characterized by two general vehicle lane in each direction was also evaluated. With a four-lane cross-section, most operations at signalized intersection still largely reflect the three lane scenario with minimal to no improvements. Minor Improvements in operations were observed at the intersection of Malden Road and Reaume Road. Operations at the Left turn movements at unsignalized intersections deteriorated as vehicles would now have to navigate through two lanes of live traffic. Although operational improvements were observed at some interactions in this scenario, greater land impacts are required to construct a four-lane cross-section. In addition, constructing roadways to add additional capacity that prioritize motor vehicles works against the sustainability goals of the Town and County and is likely to reduce the positive impacts of the recommended active and sustainable transportation improvements.

The recommendations of this study are as follows:

Roadway Preliminary Recommendations

- Recommend carrying forward the improved three-lane and four-lane cross-section roadway alternatives for further evaluation through subsequent phases of this EA Addendum which include:
  - Widen Malden Road between the Cahill Drain and Meagan Drive
  - Under the three-lane and four-lane alternatives the inclusion of dedicated on-street bike lanes and an in-boulevard multi-use path on the east side of the road, respectively, should be further evaluated;
  - Signalizing the intersection of Reaume Road with a fourth leg added as part of the roadway’s easterly extension. It is also recommended that active transportation features be incorporated into the design of the intersection to account for the future planned on-street bike lanes and in-boulevard path that is proposed in the Town of LaSalle’s TMP for Reaume Road;
  - Recommend re-align and signalize Bouffard Road to create a continuous east-west corridor across Malden Road. It is also recommended that active transportation features be incorporated into the design of the intersection to account for the future planned in-boulevard path that is proposed in the Town of LaSalle’s TMP for Bouffard Road;

  - It is recommended that the Laurier Parkway corridor be further evaluated to determine an appropriate solution to shift east-west through movement demand that is anticipated to be constrained; and

- It is recommended that access management be implemented along Malden Road specifically the following measures:
  - New access points should be restricted to right-in/right-out unless there is a two-way left turn lane on Malden Road;
  - All properties with frontage on Malden Road should be restricted to only one entrance unless supported by a traffic study demonstrating the need for additional entrances;
  - Commercial entrances on corner lots should obtain access from the side road – one additional right-in/right-out entrance may be considered from Malden Road if supported by a traffic study;
  - Adjacent properties should utilize shared entrances and enact appropriate easements to ensure access rights to each owner;
  - Uncontrolled entrances within 65m of a signalized intersection shall be right-in/right-out and left turns should be restricted with raised median islands that extend 20m beyond the entrance; and
  - Residential driveway spacing (for new lots) should be maximized and one shared driveway shall be used for lots with less than 15m frontage.

Active Transportation Preliminary Recommendations

- **Malden Road | Todd Lane to the Cahill Drain**
  - Recommend implementing the previously planned pedestrian crosswalk and multi-use trail connection at the Cahill Drain to improve east-west active transportation connections and provide a safe alternate route for cyclists to loop around the commercial section of Malden Road between Normandy Street and Todd Lane. This crosswalk should include a median refuge designed to accommodate pedestrians and cyclists along with a user actuated signal. This will enhance the active transportation transition between different facility types between the southern portions of Malden Road and the northern portions;
  - Dedicated bi-directional in-boulevard multi-use path on the east side of the roadway, replacing the existing sidewalk;
  - Cahill Drain Trail connection to Malden Road from the existing terminus west of Malden Road;
  - New multi-use path one on side of Newman Boulevard between the existing Cahill Drain Trail north to Orford Street;
  - Implement dedicated on-street cycling facilities on Orford Street/Elmdale Avenue between the Newman Boulevard Multi-use path in the west, and Todd Lane in the east;

  - In alignment with the Town's TMP, provide dedicated on-street cycling facilities along Normandy Street, between Malden Road and Ellis Street;
  - In alignment with the Town's TMP, provide dedicated on-street cycling facilities along Ellis Street/Trinity Avenue between Normandy Street and Elmdale Avenue

- **Malden Road | The Cahill Drain to southern Study Limits**
  - Based on a planning-level analysis the preliminary preferred solution from a planning perspective are either dedicated cycle tracks on each side of the roadway, or a bi-directional cycle-track on the east side of the roadway along with sidewalks on both sides. This is to be confirmed and determined through detailed design and feasibility analysis conducted in subsequent phases of this EA Addendum.
  - Other potential viable solutions that would be appropriate if the recommended option is not feasible include:
    - In-Boulevard Multi-Use path on the east side of the roadway. No cycling facility on the west side and no sidewalk on the east side; or
    - A 3.5m bi-directional cycle track on the east side of the roadway, separated by a curb, along with sidewalks on both sides of the road.

Appendix A TRAFFIC COUNTS

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

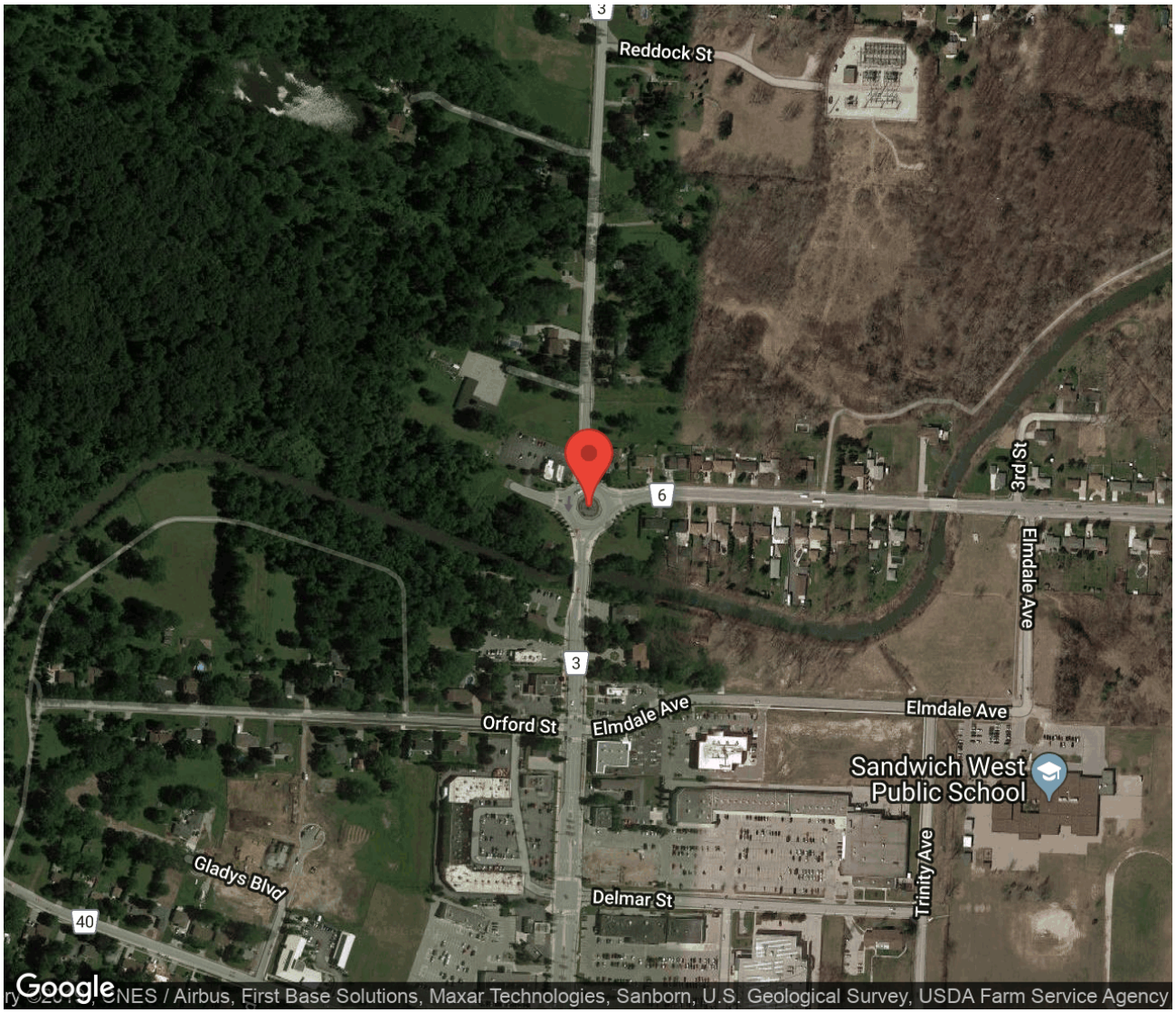
Intersection Count Report

Intersection:	Malden Rd & Todd Lane
Municipality:	LaSalle
Count Date:	Aug 01, 2019
Site Code:	1925700001
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	10	96	0	0	106	0	1	252	203	0	456	0
08:00 - 09:00	11	139	0	0	150	0	4	295	250	0	549	0
09:00 - 10:00	21	175	1	0	197	0	4	194	288	0	486	0
BREAK												
12:00 - 13:00	16	210	1	0	227	0	2	215	290	0	507	0
13:00 - 14:00	11	220	1	0	232	0	3	182	298	0	483	2
BREAK												
16:00 - 17:00	44	474	2	0	520	0	1	199	334	0	534	2
17:00 - 18:00	31	439	0	0	470	0	0	215	258	0	473	0
18:00 - 19:00	24	269	0	0	293	0	1	200	279	0	480	0
GRAND TOTAL	**168**	**2022**	**5**	**0**	**2195**	**0**	**16**	**1752**	**2200**	**0**	**3968**	**4**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

Todd Lane - Traffic Summary

Hour	East Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)						West Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	144	1	18	0	163	0	0	1	0	0	1	0
08:00 - 09:00	195	0	32	0	227	1	1	0	1	0	2	1
09:00 - 10:00	234	1	26	0	261	0	1	2	5	0	8	0
BREAK												
12:00 - 13:00	275	0	23	0	298	0	3	2	3	0	8	0
13:00 - 14:00	238	0	24	0	262	0	0	0	2	0	2	2
BREAK												
16:00 - 17:00	320	0	26	0	346	0	2	2	1	0	5	0
17:00 - 18:00	314	3	30	0	347	0	0	1	3	0	4	0
18:00 - 19:00	264	1	26	0	291	0	1	3	2	0	6	0
GRAND TOTAL	**1984**	**6**	**205**	**0**	**2195**	**1**	**8**	**11**	**17**	**0**	**36**	**3**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	21	0	0	23	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	4	21	0	0	25	1	3	0	0	4	0	1	0	0	1	0	0	0	0	0	0
07:30	1	18	0	0	19	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0
07:45	1	16	0	0	17	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0
08:00	1	19	0	0	20	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0
08:15	0	33	0	0	33	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0
08:30	5	35	0	0	40	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
08:45	1	34	0	0	35	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	7	33	1	0	41	1	6	0	0	7	0	1	0	0	1	0	0	0	0	0	0
09:15	2	36	0	0	38	1	8	0	0	9	0	0	0	0	0	0	0	0	0	0	0
09:30	5	34	0	0	39	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0
09:45	4	42	0	0	46	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	33	342	1	0	376	9	65	0	0	74	0	3	0	0	3	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	4	54	1	0	59	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
12:15	6	45	0	0	51	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0
12:30	2	37	0	0	39	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
12:45	3	40	0	0	43	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0
13:00	1	44	1	0	46	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
13:15	5	56	0	0	61	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0
13:30	1	49	0	0	50	2	8	0	0	10	0	0	0	0	0	0	0	0	0	0	0
13:45	1	43	0	0	44	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	23	368	2	0	393	4	61	0	0	65	0	1	0	0	1	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	13	87	0	0	100	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
16:15	6	87	2	0	95	0	23	0	0	23	0	0	0	0	0	0	0	0	0	0	0
16:30	13	116	0	0	129	0	23	0	0	23	0	0	0	0	0	0	0	0	0	0	0
16:45	12	113	0	0	125	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0
17:00	8	106	0	0	114	2	15	0	0	17	0	0	0	0	0	0	0	0	0	0	0
17:15	4	101	0	0	105	3	13	0	0	16	0	0	0	0	0	0	0	0	0	0	0
17:30	3	91	0	0	94	1	15	0	0	16	0	0	0	0	0	0	0	0	0	0	0
17:45	9	81	0	0	90	1	17	0	0	18	0	0	0	0	0	0	0	0	0	0	0
18:00	8	74	0	0	82	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
18:15	6	62	0	0	68	1	13	0	0	14	0	0	0	0	0	0	0	0	0	0	0
18:30	3	52	0	0	55	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0
18:45	5	38	0	0	43	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	90	1008	2	0	1100	9	174	0	0	183	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	146	1718	5	0	1869	22	300	0	0	322	0	4	0	0	4	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	36	35	0	71	0	9	5	0	14	0	0	0	0	0	0	0	0	0	0	0
07:15	0	42	30	0	72	0	3	15	0	18	0	0	1	0	1	0	0	0	0	0	0
07:30	0	64	53	0	117	0	11	8	0	19	0	1	0	0	1	0	0	0	0	0	0
07:45	1	76	41	0	118	0	10	13	0	23	0	0	2	0	2	0	0	0	0	0	0
08:00	1	84	41	0	126	0	11	7	0	18	0	0	2	0	2	0	0	0	0	0	0
08:15	0	68	48	0	116	0	9	11	0	20	0	0	3	0	3	0	0	0	0	0	0
08:30	1	62	49	0	112	0	6	9	0	15	0	0	2	0	2	0	0	0	0	0	0
08:45	1	46	69	0	116	1	9	8	0	18	0	0	1	0	1	0	0	0	0	0	0
09:00	1	39	53	0	93	0	8	11	0	19	0	0	1	0	1	0	0	0	0	0	0
09:15	0	40	60	0	100	0	7	9	0	16	0	0	1	0	1	0	0	0	0	0	0
09:30	3	53	66	0	122	0	6	16	0	22	0	0	3	0	3	0	0	0	0	0	0
09:45	0	32	57	0	89	0	9	11	0	20	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	8	642	602	0	1252	1	98	123	0	222	0	1	16	0	17	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	1	50	48	0	99	0	8	11	0	19	0	1	2	0	3	0	0	0	0	0	0
12:15	0	41	77	0	118	0	7	13	0	20	0	0	0	0	0	0	0	0	0	0	0
12:30	1	40	66	0	107	0	10	6	0	16	0	0	1	0	1	0	0	0	0	0	0
12:45	0	45	53	0	98	0	13	12	0	25	0	0	1	0	1	0	0	0	0	0	0
13:00	1	44	57	0	102	0	4	10	0	14	0	0	2	0	2	0	0	0	0	0	1
13:15	2	42	80	0	124	0	7	8	0	15	0	0	0	0	0	0	0	0	0	0	0
13:30	0	37	63	0	100	0	10	10	0	20	0	0	1	0	1	0	0	0	0	0	0
13:45	0	35	57	0	92	0	3	10	0	13	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	5	334	501	0	840	0	62	80	0	142	0	1	7	0	8	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	0	40	71	0	111	0	13	11	0	24	0	0	3	0	3	0	0	0	0	0	0
16:15	0	40	60	0	100	0	8	14	0	22	0	0	0	0	0	0	0	0	0	0	0
16:30	0	41	79	0	120	0	4	13	0	17	0	0	3	0	3	0	0	0	0	0	1
16:45	0	45	67	0	112	1	8	12	0	21	0	0	1	0	1	0	0	0	0	0	1
17:00	0	52	55	0	107	0	8	15	0	23	0	0	1	0	1	0	0	0	0	0	0
17:15	0	46	59	0	105	0	8	7	0	15	0	0	0	0	0	0	0	0	0	0	0
17:30	0	37	54	0	91	0	8	7	0	15	0	1	1	0	2	0	0	0	0	0	0
17:45	0	49	50	0	99	0	6	8	0	14	0	0	1	0	1	0	0	0	0	0	0
18:00	0	63	70	0	133	0	6	6	0	12	0	1	1	0	2	0	0	0	0	0	0
18:15	1	38	67	0	106	0	5	3	0	8	0	0	0	0	0	0	0	0	0	0	0
18:30	0	41	57	0	98	0	7	7	0	14	0	0	1	0	1	0	0	0	0	0	0
18:45	0	34	64	0	98	0	5	3	0	8	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	1	526	753	0	1280	1	86	106	0	193	0	2	12	0	14	0	0	0	0	0	2
GRAND TOTAL	14	1502	1856	0	3372	2	246	309	0	557	0	4	35	0	39	0	0	0	0	0	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	21	0	1	0	22	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	19	1	5	0	25	9	0	3	0	12	1	0	0	0	1	0	0	0	0	0	0
07:30	33	0	0	0	33	6	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0
07:45	38	0	8	0	46	8	0	0	0	8	6	0	0	0	6	0	0	0	0	0	0
08:00	41	0	6	0	47	6	0	2	0	8	1	0	0	0	1	0	0	0	0	0	1
08:15	37	0	4	0	41	8	0	1	0	9	2	0	0	0	2	0	0	0	0	0	0
08:30	37	0	10	0	47	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
08:45	48	0	6	0	54	7	0	2	0	9	1	0	0	0	1	0	0	0	0	0	0
09:00	37	1	6	0	44	11	0	1	0	12	2	0	0	0	2	0	0	0	0	0	0
09:15	52	0	6	0	58	9	0	2	0	11	4	0	0	0	4	0	0	0	0	0	0
09:30	40	0	2	0	42	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0
09:45	60	0	8	0	68	7	0	1	0	8	2	0	0	0	2	0	0	0	0	0	0
SUBTOTAL	463	2	62	0	527	90	0	14	0	104	20	0	0	0	20	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	51	0	5	0	56	7	0	2	0	9	1	0	0	0	1	0	0	0	0	0	0
12:15	52	0	2	0	54	7	0	1	0	8	1	0	0	0	1	0	0	0	0	0	0
12:30	62	0	6	0	68	11	0	0	0	11	1	0	0	0	1	0	0	0	0	0	0
12:45	65	0	4	0	69	13	0	3	0	16	4	0	0	0	4	0	0	0	0	0	0
13:00	47	0	3	0	50	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
13:15	55	0	5	0	60	7	0	0	0	7	1	0	0	0	1	0	0	0	0	0	0
13:30	43	0	7	0	50	13	0	0	0	13	1	0	0	0	1	0	0	0	0	0	0
13:45	55	0	8	0	63	9	0	1	0	10	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	430	0	40	0	470	73	0	7	0	80	10	0	0	0	10	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	54	0	7	0	61	10	0	1	0	11	0	0	0	0	0	0	0	0	0	0	0
16:15	65	0	7	0	72	15	0	1	0	16	1	0	0	0	1	0	0	0	0	0	0
16:30	75	0	6	0	81	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0
16:45	73	0	4	0	77	15	0	0	0	15	1	0	0	0	1	0	0	0	0	0	0
17:00	79	0	6	0	85	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0
17:15	72	1	8	0	81	7	0	2	0	9	1	0	0	0	1	0	0	0	0	0	0
17:30	56	2	4	0	62	9	0	2	0	11	0	0	0	0	0	0	0	0	0	0	0
17:45	71	0	6	0	77	11	0	1	0	12	1	0	0	0	1	0	0	0	0	0	0
18:00	71	0	7	0	78	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0
18:15	57	0	3	0	60	5	0	3	0	8	1	0	1	0	2	0	0	0	0	0	0
18:30	56	0	4	0	60	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
18:45	49	0	8	0	57	5	1	0	0	6	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	778	3	70	0	851	114	1	11	0	126	6	0	1	0	7	0	0	0	0	0	0
GRAND TOTAL	1671	5	172	0	1848	277	1	32	0	310	36	0	1	0	37	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	2	3	6	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:15	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	3	1	4	0	8	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Todd Lane
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Todd Lane

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	1	2	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	3	4	5	0	12	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	8	8	15	0	31	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	3

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:45:00
To:	10:00:00	To:	09:45:00

Intersection: Malden Rd & Todd Lane
Site ID: 1925700001
Count Date: Aug 01, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	153	199	352
MT	31	35	66
HT	2	0	2
Bicycles	0	0	0
	186	**234**	**420**

Malden Rd

Bicycles	0	0	0	0
HT	0	2	0	0
MT	0	28	3	0
Cars	1	137	15	0
Totals	**1**	**167**	**18**	**0**

East Approach

	Out	In	Total
Cars	198	265	463
MT	42	47	89
HT	7	6	13
Bicycles	0	0	0
	247	**318**	**565**

Todd Lane

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	0	1	**1**
0	0	0	2	**2**
0	0	0	4	**4**

Peds: 0

Peds: 0

Peds: 0



Todd Lane

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
25	20	5	0	0
1	1	0	0	0
221	177	37	7	0

West Approach

	Out	In	Total
Cars	7	7	14
MT	0	1	1
HT	0	0	0
Bicycles	0	0	0
	7	**8**	**15**

Totals	**6**	**208**	**298**	**0**
Cars	5	178	248	0
MT	1	30	44	0
HT	0	0	6	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	431	318	749
MT	75	65	140
HT	6	9	15
Bicycles	0	0	0
	512	**392**	**904**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Todd Lane
Count Date: Aug 01, 2019
Period: 07:00 - 10:00

Peak Hour Data (08:45 - 09:45)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Todd Lane						West Approach Todd Lane						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
08:45	2	38	0	0	0	40	2	55	78	0	0	135	56	0	8	0	0	64	0	0	0	0	0	0	239
09:00	8	40	1	0	0	49	1	47	65	0	0	113	50	1	7	0	0	58	0	0	1	0	0	1	221
09:15	3	44	0	0	0	47	0	47	70	0	0	117	65	0	8	0	0	73	1	1	2	0	0	4	241
09:30	5	45	0	0	0	50	3	59	85	0	0	147	50	0	2	0	0	52	0	1	1	0	0	2	251
Grand Total	**18**	**167**	**1**	**0**	**0**	**186**	**6**	**208**	**298**	**0**	**0**	**512**	**221**	**1**	**25**	**0**	**0**	**247**	**1**	**2**	**4**	**0**	**0**	**7**	**952**
Approach %	9.7	89.8	0.5	0		-	1.2	40.6	58.2	0		-	89.5	0.4	10.1	0		-	14.3	28.6	57.1	0		-	
Totals %	1.9	17.5	0.1	0		19.5	0.6	21.8	31.3	0		53.8	23.2	0.1	2.6	0		25.9	0.1	0.2	0.4	0		0.7	
PHF	**0.56**	**0.93**	**0.25**	**0**		**0.93**	**0.5**	**0.88**	**0.88**	**0**		**0.87**	**0.85**	**0.25**	**0.78**	**0**		**0.85**	**0.25**	**0.5**	**0.5**	**0**		**0.44**	**0.95**
Cars	15	137	1	0		153	5	178	248	0		431	177	1	20	0		198	1	2	4	0		7	789
% Cars	83.3	82	100	0		82.3	83.3	85.6	83.2	0		84.2	80.1	100	80	0		80.2	100	100	100	0		100	82.9
Medium Trucks	3	28	0	0		31	1	30	44	0		75	37	0	5	0		42	0	0	0	0		0	148
% Medium Trucks	16.7	16.8	0	0		16.7	16.7	14.4	14.8	0		14.6	16.7	0	20	0		17	0	0	0	0		0	15.5
Heavy Trucks	0	2	0	0		2	0	0	6	0		6	7	0	0	0		7	0	0	0	0		0	15
% Heavy Trucks	0	1.2	0	0		1.1	0	0	2	0		1.2	3.2	0	0	0		2.8	0	0	0	0		0	1.6
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Todd Lane
Site ID: 1925700001
Count Date: Aug 01, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	192	196	388
MT	35	44	79
HT	0	1	1
Bicycles	0	0	0
	227	**241**	**468**

Malden Rd

Bicycles	0	0	0	0
HT	0	0	0	0
MT	0	34	1	0
Cars	1	176	15	0
Totals	**1**	**210**	**16**	**0**

East Approach

	Out	In	Total
Cars	247	260	507
MT	44	44	88
HT	7	4	11
Bicycles	0	0	0
	298	**308**	**606**

Todd Lane

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	0	3	**3**
0	0	1	1	**2**
0	0	1	2	**3**

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Todd Lane

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
23	17	6	0	0
0	0	0	0	0
275	230	38	7	0

West Approach

	Out	In	Total
Cars	6	3	9
MT	2	0	2
HT	0	0	0
Bicycles	0	0	0
	8	**3**	**11**

Totals	**2**	**215**	**290**	**0**
Cars	2	176	244	0
MT	0	38	42	0
HT	0	1	4	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	422	408	830
MT	80	73	153
HT	5	7	12
Bicycles	0	0	0
	507	**488**	**995**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Todd Lane
Count Date: Aug 01, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Todd Lane						West Approach Todd Lane						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
12:00	4	65	1	0	0	70	1	59	61	0	0	121	59	0	7	0	0	66	0	1	2	0	0	3	260
12:15	7	54	0	0	0	61	0	48	90	0	0	138	60	0	3	0	0	63	1	0	1	0	0	2	264
12:30	2	43	0	0	0	45	1	50	73	0	0	124	74	0	6	0	0	80	1	1	0	0	0	2	251
12:45	3	48	0	0	0	51	0	58	66	0	0	124	82	0	7	0	0	89	1	0	0	0	0	1	265
Grand Total	**16**	**210**	**1**	**0**	**0**	**227**	**2**	**215**	**290**	**0**	**0**	**507**	**275**	**0**	**23**	**0**	**0**	**298**	**3**	**2**	**3**	**0**	**0**	**8**	**1040**
Approach %	7	92.5	0.4	0		-	0.4	42.4	57.2	0		-	92.3	0	7.7	0		-	37.5	25	37.5	0		-	
Totals %	1.5	20.2	0.1	0		21.8	0.2	20.7	27.9	0		48.8	26.4	0	2.2	0		28.7	0.3	0.2	0.3	0		0.8	
PHF	**0.57**	**0.81**	**0.25**	**0**		**0.81**	**0.5**	**0.91**	**0.81**	**0**		**0.92**	**0.84**	**0**	**0.82**	**0**		**0.84**	**0.75**	**0.5**	**0.38**	**0**		**0.67**	**0.98**
Cars	15	176	1	0		192	2	176	244	0		422	230	0	17	0		247	3	1	2	0		6	867
% Cars	93.8	83.8	100	0		84.6	100	81.9	84.1	0		83.2	83.6	0	73.9	0		82.9	100	50	66.7	0		75	83.4
Medium Trucks	1	34	0	0		35	0	38	42	0		80	38	0	6	0		44	0	1	1	0		2	161
% Medium Trucks	6.3	16.2	0	0		15.4	0	17.7	14.5	0		15.8	13.8	0	26.1	0		14.8	0	50	33.3	0		25	15.5
Heavy Trucks	0	0	0	0		0	0	1	4	0		5	7	0	0	0		7	0	0	0	0		0	12
% Heavy Trucks	0	0	0	0		0	0	0.5	1.4	0		1	2.5	0	0	0		2.3	0	0	0	0		0	1.2
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:15:00
To:	19:00:00	To:	17:15:00

Intersection: Malden Rd & Todd Lane
Site ID: 1925700001
Count Date: Aug 01, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	463	203	666
MT	78	30	108
HT	0	0	0
Bicycles	0	0	0
	541	**233**	**774**

Malden Rd

Bicycles	0	0	0	0
HT	0	0	0	0
MT	0	76	2	0
Cars	2	422	39	0
Totals	**2**	**498**	**41**	**0**

East Approach

	Out	In	Total
Cars	315	302	617
MT	50	56	106
HT	2	5	7
Bicycles	0	0	0
	367	**363**	**730**

Todd Lane

Bicycles	HT	MT	Cars	Totals	
0	0	0	0	**0**	
0	0	0	2	**2**	
0	0	0	2	**2**	
0	0	1	1	**2**	

Peds: 0



Peds: 0

Peds: 2

Todd Lane

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	25	23	2	0	0
	0	0	0	0	0
	342	292	48	2	0

West Approach

	Out	In	Total
Cars	5	2	7
MT	1	1	2
HT	0	0	0
Bicycles	0	0	0
	6	**3**	**9**

Totals	**1**	**206**	**320**	**0**
Cars	0	178	261	0
MT	1	28	54	0
HT	0	0	5	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	439	715	1154
MT	83	125	208
HT	5	2	7
Bicycles	0	0	0
	527	**842**	**1369**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Todd Lane
Count Date: Aug 01, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Todd Lane						West Approach Todd Lane						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
16:15	6	110	2	0	0	118	0	48	74	0	0	122	81	0	8	0	0	89	1	2	0	0	0	3	332
16:30	13	139	0	0	0	152	0	45	95	0	1	140	86	0	6	0	0	92	1	0	1	0	0	2	386
16:45	12	128	0	0	0	140	1	53	80	0	1	134	89	0	4	0	0	93	0	0	0	0	0	0	367
17:00	10	121	0	0	0	131	0	60	71	0	0	131	86	0	7	0	0	93	0	0	1	0	0	1	356
Grand Total	**41**	**498**	**2**	**0**	**0**	**541**	**1**	**206**	**320**	**0**	**2**	**527**	**342**	**0**	**25**	**0**	**0**	**367**	**2**	**2**	**2**	**0**	**0**	**6**	**1441**
Approach %	7.6	92.1	0.4	0		-	0.2	39.1	60.7	0		-	93.2	0	6.8	0		-	33.3	33.3	33.3	0		-	
Totals %	2.8	34.6	0.1	0		37.5	0.1	14.3	22.2	0		36.6	23.7	0	1.7	0		25.5	0.1	0.1	0.1	0		0.4	
PHF	**0.79**	**0.9**	**0.25**	**0**		**0.89**	**0.25**	**0.86**	**0.84**	**0**		**0.94**	**0.96**	**0**	**0.78**	**0**		**0.99**	**0.5**	**0.25**	**0.5**	**0**		**0.5**	**0.93**
Cars	39	422	2	0		463	0	178	261	0		439	292	0	23	0		315	2	2	1	0		5	1222
% Cars	95.1	84.7	100	0		85.6	0	86.4	81.6	0		83.3	85.4	0	92	0		85.8	100	100	50	0		83.3	84.8
Medium Trucks	2	76	0	0		78	1	28	54	0		83	48	0	2	0		50	0	0	1	0		1	212
% Medium Trucks	4.9	15.3	0	0		14.4	100	13.6	16.9	0		15.7	14	0	8	0		13.6	0	0	50	0		16.7	14.7
Heavy Trucks	0	0	0	0		0	0	0	5	0		5	2	0	0	0		2	0	0	0	0		0	7
% Heavy Trucks	0	0	0	0		0	0	0	1.6	0		0.9	0.6	0	0	0		0.5	0	0	0	0		0	0.5
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					2	-					0	-					0	-	2
% Peds					0	-					100	-					0	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

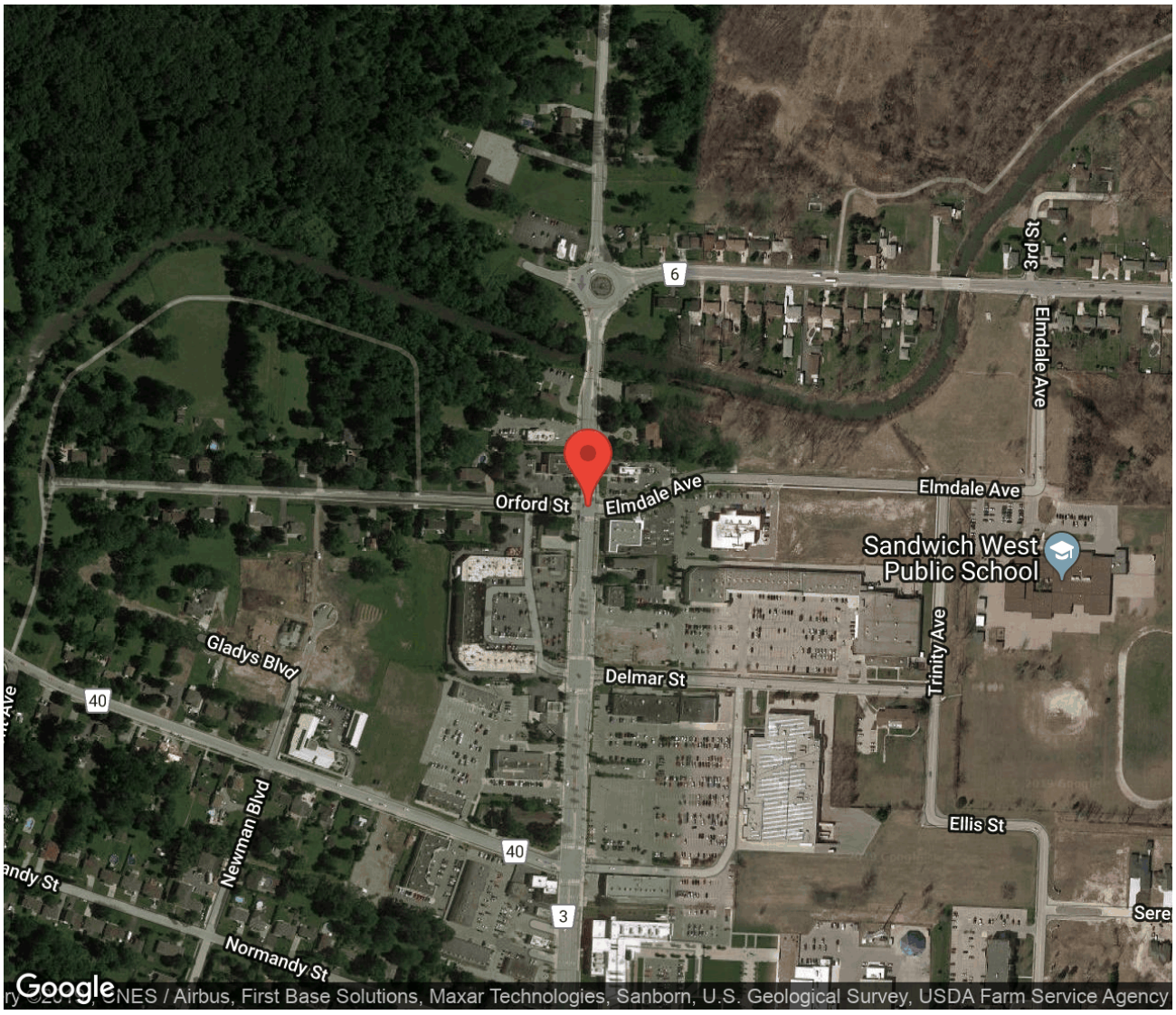
Intersection Count Report

Intersection:	Malden Rd & Orford St-Elmdale Ave
Municipality:	LaSalle
Count Date:	Aug 01, 2019
Site Code:	1925700002
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

Malden Rd - Traffic Summary

Hour	North Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)						South Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	19	249	7	0	275	2	8	446	52	0	506	0
08:00 - 09:00	41	330	23	0	394	2	5	525	75	0	605	4
09:00 - 10:00	33	400	31	0	464	8	18	479	67	0	564	7
BREAK												
12:00 - 13:00	30	486	44	0	560	1	32	474	109	0	615	3
13:00 - 14:00	47	431	30	0	508	6	27	434	100	0	561	4
BREAK												
16:00 - 17:00	69	702	47	0	818	0	20	463	105	0	588	5
17:00 - 18:00	60	687	43	0	790	0	23	410	106	0	539	0
18:00 - 19:00	39	491	30	0	560	2	11	423	94	0	528	2
GRAND TOTAL	**338**	**3776**	**255**	**0**	**4369**	**21**	**144**	**3654**	**708**	**0**	**4506**	**25**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

Elmdale Ave - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	11	0	22	0	33	1	9	1	4	0	14	3
08:00 - 09:00	30	1	35	0	66	0	16	2	3	0	21	3
09:00 - 10:00	24	4	35	0	63	5	20	3	19	0	42	4
BREAK												
12:00 - 13:00	68	5	36	0	109	3	34	10	31	0	75	3
13:00 - 14:00	67	6	30	0	103	7	43	9	24	0	76	5
BREAK												
16:00 - 17:00	85	7	34	0	126	2	32	14	25	0	71	3
17:00 - 18:00	92	4	32	0	128	2	32	12	22	0	66	0
18:00 - 19:00	69	4	28	0	101	0	28	8	14	0	50	2
GRAND TOTAL	**446**	**31**	**252**	**0**	**729**	**20**	**214**	**59**	**142**	**0**	**415**	**23**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	1	48	1	0	50	2	7	0	0	9	0	1	0	0	1	0	0	0	0	0	1
07:15	1	45	0	0	46	1	13	0	0	14	0	2	0	0	2	0	0	0	0	0	0
07:30	6	46	1	0	53	0	9	1	0	10	0	1	0	0	1	0	0	0	0	0	0
07:45	7	56	3	0	66	1	15	1	0	17	0	6	0	0	6	0	0	0	0	0	1
08:00	7	59	4	0	70	1	12	0	0	13	0	1	0	0	1	0	0	0	0	0	0
08:15	10	58	9	0	77	0	18	0	0	18	0	2	0	0	2	0	0	0	0	0	0
08:30	7	65	5	0	77	3	11	0	0	14	0	0	0	0	0	0	0	0	0	0	1
08:45	11	88	3	0	102	2	15	2	0	19	0	1	0	0	1	0	0	0	0	0	1
09:00	5	69	8	0	82	1	17	0	0	18	0	3	0	0	3	0	0	0	0	0	2
09:15	4	87	5	0	96	2	20	0	0	22	0	4	0	0	4	0	0	0	0	0	0
09:30	6	73	7	0	86	3	21	0	0	24	0	1	0	0	1	0	0	0	0	0	3
09:45	11	87	10	0	108	1	16	1	0	18	0	2	0	0	2	0	0	0	0	0	3
SUBTOTAL	76	781	56	0	913	17	174	5	0	196	0	24	0	0	24	0	0	0	0	0	12

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	4	112	6	0	122	2	23	4	0	29	0	1	0	0	1	0	0	0	0	0	0
12:15	4	98	16	0	118	0	18	2	0	20	0	1	0	0	1	0	0	0	0	0	0
12:30	7	88	9	0	104	4	17	0	0	21	0	1	0	0	1	0	0	0	0	0	1
12:45	8	104	7	0	119	1	19	0	0	20	0	4	0	0	4	0	0	0	0	0	0
13:00	6	87	6	0	99	2	14	2	0	18	0	0	0	0	0	0	0	0	0	0	0
13:15	11	104	7	0	122	1	8	2	0	11	0	2	0	0	2	0	0	0	0	0	0
13:30	7	95	6	0	108	3	15	1	0	19	0	1	0	0	1	0	0	0	0	0	3
13:45	15	87	4	0	106	2	17	2	0	21	0	1	0	0	1	0	0	0	0	0	3
SUBTOTAL	62	775	61	0	898	15	131	13	0	159	0	11	0	0	11	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	6	135	10	0	151	1	16	2	0	19	0	0	0	0	0	0	0	0	0	0	0
16:15	16	146	7	0	169	5	29	1	0	35	0	1	0	0	1	0	0	0	0	0	0
16:30	21	160	9	0	190	1	28	1	0	30	0	0	0	0	0	0	0	0	0	0	0
16:45	12	164	16	0	192	7	22	1	0	30	0	1	0	0	1	0	0	0	0	0	0
17:00	12	174	12	0	198	2	16	1	0	19	0	0	0	0	0	0	0	0	0	0	0
17:15	18	145	14	0	177	0	21	2	0	23	0	1	0	0	1	0	0	0	0	0	0
17:30	14	140	7	0	161	2	17	1	0	20	0	0	0	0	0	0	0	0	0	0	0
17:45	10	141	6	0	157	2	31	0	0	33	0	1	0	0	1	0	0	0	0	0	0
18:00	11	128	7	0	146	1	23	4	0	28	0	0	0	0	0	0	0	0	0	0	0
18:15	9	112	6	0	127	1	16	0	0	17	0	1	0	0	1	0	0	0	0	0	1
18:30	11	97	9	0	117	0	17	2	0	19	0	0	0	0	0	0	0	0	0	0	1
18:45	6	87	1	0	94	0	9	1	0	10	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	146	1629	104	0	1879	22	245	16	0	283	0	6	0	0	6	0	0	0	0	0	2
GRAND TOTAL	284	3185	221	0	3690	54	550	34	0	638	0	41	0	0	41	0	0	0	0	0	21

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	70	8	0	80	0	19	2	0	21	0	0	0	0	0	0	0	0	0	0	0
07:15	0	73	9	0	82	0	21	2	0	23	0	1	0	0	1	0	0	0	0	0	0
07:30	4	99	10	0	113	1	18	1	0	20	0	1	0	0	1	0	0	0	0	0	0
07:45	1	116	15	0	132	0	27	5	0	32	0	1	0	0	1	0	0	0	0	0	0
08:00	1	113	10	0	124	0	14	4	0	18	0	2	0	0	2	0	0	0	0	0	1
08:15	2	112	19	0	133	0	23	2	0	25	0	3	0	0	3	0	0	0	0	0	2
08:30	0	112	18	0	130	0	18	4	0	22	0	2	0	0	2	0	0	0	0	0	0
08:45	2	109	14	0	125	0	16	4	0	20	0	1	0	0	1	0	0	0	0	0	1
09:00	1	103	13	0	117	0	18	2	0	20	0	1	0	0	1	0	0	0	0	0	1
09:15	7	93	10	0	110	1	15	4	0	20	0	1	0	0	1	0	0	0	0	0	6
09:30	6	110	18	0	134	0	20	3	0	23	0	2	0	0	2	0	0	0	0	0	0
09:45	2	92	15	0	109	1	24	2	0	27	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	28	1202	159	0	1389	3	233	35	0	271	0	15	0	0	15	0	0	0	0	0	11

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	9	92	21	0	122	1	17	1	0	19	0	3	0	0	3	0	0	0	0	0	0
12:15	8	113	20	0	141	2	23	5	0	30	0	0	0	0	0	0	0	0	0	0	0
12:30	4	98	28	0	130	1	15	3	0	19	0	1	0	0	1	0	0	0	0	0	3
12:45	6	86	28	0	120	1	25	3	0	29	0	1	0	0	1	0	0	0	0	0	0
13:00	4	103	22	0	129	3	11	3	0	17	0	2	0	0	2	0	0	0	0	0	1
13:15	5	113	17	0	135	1	12	3	0	16	0	0	0	0	0	0	0	0	0	0	1
13:30	3	79	24	0	106	1	14	5	0	20	0	1	0	0	1	0	0	0	0	0	0
13:45	7	89	21	0	117	3	9	5	0	17	0	1	0	0	1	0	0	0	0	0	2
SUBTOTAL	46	773	181	0	1000	13	126	28	0	167	0	9	0	0	9	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	4	97	29	0	130	2	16	7	0	25	0	3	0	0	3	0	0	0	0	0	2
16:15	3	89	19	0	111	1	18	4	0	23	0	0	0	0	0	0	0	0	0	0	0
16:30	3	106	22	0	131	2	14	3	0	19	0	3	0	0	3	0	0	0	0	0	1
16:45	5	100	19	0	124	0	16	2	0	18	0	1	0	0	1	0	0	0	0	0	2
17:00	9	90	29	0	128	1	22	2	0	25	0	1	0	0	1	0	0	0	0	0	0
17:15	4	89	20	0	113	0	13	6	0	19	0	0	0	0	0	0	0	0	0	0	0
17:30	6	93	20	0	119	0	13	1	0	14	0	2	0	0	2	0	0	0	0	0	0
17:45	2	77	23	0	102	1	10	5	0	16	0	0	0	0	0	0	0	0	0	0	0
18:00	3	111	19	0	133	0	13	7	0	20	0	2	0	0	2	0	0	0	0	0	0
18:15	2	96	20	0	118	1	11	4	0	16	0	0	0	0	0	0	0	0	0	0	1
18:30	3	76	23	0	102	0	14	4	0	18	0	1	0	0	1	0	0	0	0	0	0
18:45	2	90	16	0	108	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	46	1114	259	0	1419	8	169	46	0	223	0	13	0	0	13	0	0	0	0	0	7
GRAND TOTAL	120	3089	599	0	3808	24	528	109	0	661	0	37	0	0	37	0	0	0	0	0	25

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Elmdale Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	2	0	6	0	8	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
07:30	4	0	7	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	4	0	8	0	12	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
08:15	5	0	5	0	10	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	5	1	8	0	14	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
08:45	10	0	6	0	16	3	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0
09:00	5	0	4	0	9	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
09:15	7	1	12	0	20	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1
09:30	5	1	9	0	15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
09:45	6	2	3	0	11	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	56	5	76	0	137	9	0	15	0	24	0	0	1	0	1	0	0	0	0	0	6

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Elmdale Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	11	1	7	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	16	0	7	0	23	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0
12:30	15	1	8	0	24	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	1
12:45	16	2	12	0	30	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	2
13:00	19	1	5	0	25	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2
13:15	7	1	7	0	15	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
13:30	15	1	11	0	27	4	1	2	0	7	0	0	0	0	0	0	0	0	0	0	1
13:45	16	0	3	0	19	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0	4
SUBTOTAL	115	7	60	0	182	20	4	6	0	30	0	0	0	0	0	0	0	0	0	0	10

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Elmdale Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	12	1	9	0	22	8	0	1	0	9	0	0	0	0	0	0	0	0	0	0	0
16:15	14	3	9	0	26	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0
16:30	23	2	5	0	30	4	0	2	0	6	0	0	0	0	0	0	0	0	0	0	1
16:45	16	1	5	0	22	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	1
17:00	22	1	7	0	30	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
17:15	23	1	7	0	31	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	1
17:30	14	1	6	0	21	6	0	1	0	7	0	0	0	0	0	0	0	0	0	0	1
17:45	19	0	7	0	26	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0
18:00	9	1	6	0	16	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0
18:15	22	2	2	0	26	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
18:30	12	0	12	0	24	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0
18:45	14	0	6	0	20	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	200	13	81	0	294	46	2	13	0	61	0	0	0	0	0	0	0	0	0	0	4
GRAND TOTAL	371	25	217	0	613	75	6	34	0	115	0	0	1	0	1	0	0	0	0	0	20

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Orford St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	5	1	0	0	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	1	0	1	0	2	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1
08:00	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	3	0	0	0	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1
08:30	4	0	1	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	5	0	1	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
09:00	3	0	2	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:15	3	2	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
09:30	6	0	9	0	15	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	2
09:45	3	1	5	0	9	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	36	4	24	0	64	8	2	2	0	12	1	0	0	0	1	0	0	0	0	0	10

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Orford St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	10	1	8	0	19	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
12:15	7	2	8	0	17	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
12:30	5	4	4	0	13	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	3
12:45	6	1	6	0	13	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0
13:00	10	4	3	0	17	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
13:15	3	2	8	0	13	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1
13:30	9	1	3	0	13	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0
13:45	9	1	3	0	13	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	4
SUBTOTAL	59	16	43	0	118	18	3	12	0	33	0	0	0	0	0	0	0	0	0	0	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Orford St-Elmdale Ave
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Orford St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	7	1	5	0	13	4	1	1	0	6	0	0	0	0	0	0	0	0	0	0	3
16:15	4	3	5	0	12	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
16:30	5	4	3	0	12	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
16:45	6	2	9	0	17	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
17:00	8	0	8	0	16	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:15	9	6	6	0	21	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
17:30	5	4	2	0	11	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0
17:45	7	0	3	0	10	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
18:00	9	5	4	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	5	1	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
18:30	9	0	3	0	12	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
18:45	5	2	4	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	79	28	54	0	161	13	6	6	0	25	0	0	1	0	1	0	0	0	0	0	5
GRAND TOTAL	174	48	121	0	343	39	11	20	0	70	1	0	1	0	2	0	0	0	0	0	23

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:45:00
To:	10:00:00	To:	09:45:00

Intersection: Malden Rd & Orford St-Elmdale Ave
Site ID: 1925700002
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	366	463	829
MT	83	83	166
HT	9	6	15
Bicycles	0	0	0
	458	**552**	**1010**

Malden Rd

Bicycles	0	0	0	0
HT	0	9	0	0
MT	2	73	8	0
Cars	23	317	26	0
Totals	**25**	**399**	**34**	**0**

East Approach

	Out	In	Total
Cars	60	83	143
MT	11	21	32
HT	1	0	1
Bicycles	0	0	0
	72	**104**	**176**

Orford St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	6	17	**23**
0	0	0	2	**2**
0	0	0	14	**14**

Peds: 6

Peds: 6

N
W
E
S

Peds: 4

Peds: 8

Elmdale Ave

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
40	31	8	1	0
2	2	0	0	0
30	27	3	0	0

West Approach

	Out	In	Total
Cars	33	41	74
MT	6	3	9
HT	0	0	0
Bicycles	0	0	0
	39	**44**	**83**

Totals	**17**	**489**	**68**	**0**
Cars	16	415	55	0
MT	1	69	13	0
HT	0	5	0	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	486	358	844
MT	83	76	159
HT	5	9	14
Bicycles	0	0	0
	574	**443**	**1017**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Orford St-Elmdale Ave
Count Date: Aug 01, 2019
Period: 07:00 - 10:00

Peak Hour Data (08:45 - 09:45)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Elmdale Ave						West Approach Orford St						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
08:45	13	104	5	0	1	122	2	126	18	0	1	146	13	0	10	0	0	23	6	0	1	0	2	7	298
09:00	6	89	8	0	2	103	1	122	15	0	1	138	5	0	6	0	2	11	4	0	2	0	0	6	258
09:15	6	111	5	0	0	122	8	109	14	0	6	131	7	1	14	0	1	22	3	2	2	0	2	7	282
09:30	9	95	7	0	3	111	6	132	21	0	0	159	5	1	10	0	1	16	10	0	9	0	2	19	305
Grand Total	**34**	**399**	**25**	**0**	**6**	**458**	**17**	**489**	**68**	**0**	**8**	**574**	**30**	**2**	**40**	**0**	**4**	**72**	**23**	**2**	**14**	**0**	**6**	**39**	**1143**
Approach %	7.4	87.1	5.5	0		-	3	85.2	11.8	0		-	41.7	2.8	55.6	0		-	59	5.1	35.9	0		-	
Totals %	3	34.9	2.2	0		40.1	1.5	42.8	5.9	0		50.2	2.6	0.2	3.5	0		6.3	2	0.2	1.2	0		3.4	
PHF	**0.65**	**0.9**	**0.78**	**0**		**0.94**	**0.53**	**0.93**	**0.81**	**0**		**0.9**	**0.58**	**0.5**	**0.71**	**0**		**0.78**	**0.58**	**0.25**	**0.39**	**0**		**0.51**	**0.94**
Cars	26	317	23	0		366	16	415	55	0		486	27	2	31	0		60	17	2	14	0		33	945
% Cars	76.5	79.4	92	0		79.9	94.1	84.9	80.9	0		84.7	90	100	77.5	0		83.3	73.9	100	100	0		84.6	82.7
Medium Trucks	8	73	2	0		83	1	69	13	0		83	3	0	8	0		11	6	0	0	0		6	183
% Medium Trucks	23.5	18.3	8	0		18.1	5.9	14.1	19.1	0		14.5	10	0	20	0		15.3	26.1	0	0	0		15.4	16
Heavy Trucks	0	9	0	0		9	0	5	0	0		5	0	0	1	0		1	0	0	0	0		0	15
% Heavy Trucks	0	2.3	0	0		2	0	1	0	0		0.9	0	0	2.5	0		1.4	0	0	0	0		0	1.3
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					6	-					8	-					4	-					6	-	24
% Peds					25	-					33.3	-					16.7	-					25	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Orford St-Elmdale Ave
Site ID: 1925700002
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	463	451	914
MT	90	88	178
HT	7	5	12
Bicycles	0	0	0
	560	**544**	**1104**

Malden Rd

Bicycles	0	0	0	0
HT	0	7	0	0
MT	6	77	7	0
Cars	38	402	23	0
Totals	**44**	**486**	**30**	**0**

East Approach

	Out	In	Total
Cars	96	128	224
MT	13	21	34
HT	0	0	0
Bicycles	0	0	0
	109	**149**	**258**

Orford St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	6	28	**34**
0	0	2	8	**10**
0	0	5	26	**31**

Peds: 1
Peds: 3
Peds: 3
Peds: 3

Elmdale Ave

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
36	34	2	0	0
5	4	1	0	0
68	58	10	0	0

West Approach

	Out	In	Total
Cars	62	69	131
MT	13	12	25
HT	0	0	0
Bicycles	0	0	0
	75	**81**	**156**

Malden Rd

Totals	**32**	**474**	**109**	**0**
Cars	27	389	97	0
MT	5	80	12	0
HT	0	5	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	513	486	999
MT	97	92	189
HT	5	7	12
Bicycles	0	0	0
	615	**585**	**1200**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Orford St-Elmdale Ave
Count Date: Aug 01, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Elmdale Ave						West Approach Orford St						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
12:00	6	136	10	0	0	152	10	112	22	0	0	144	11	1	7	0	0	19	13	1	9	0	0	23	338
12:15	4	117	18	0	0	139	10	136	25	0	0	171	19	1	7	0	0	27	8	2	10	0	0	20	357
12:30	11	106	9	0	1	126	5	114	31	0	3	150	19	1	9	0	1	29	7	4	5	0	3	16	321
12:45	9	127	7	0	0	143	7	112	31	0	0	150	19	2	13	0	2	34	6	3	7	0	0	16	343
Grand Total	**30**	**486**	**44**	**0**	**1**	**560**	**32**	**474**	**109**	**0**	**3**	**615**	**68**	**5**	**36**	**0**	**3**	**109**	**34**	**10**	**31**	**0**	**3**	**75**	**1359**
Approach %	5.4	86.8	7.9	0		-	5.2	77.1	17.7	0		-	62.4	4.6	33	0		-	45.3	13.3	41.3	0		-	
Totals %	2.2	35.8	3.2	0		41.2	2.4	34.9	8	0		45.3	5	0.4	2.6	0		8	2.5	0.7	2.3	0		5.5	
PHF	**0.68**	**0.89**	**0.61**	**0**		**0.92**	**0.8**	**0.87**	**0.88**	**0**		**0.9**	**0.89**	**0.63**	**0.69**	**0**		**0.8**	**0.65**	**0.63**	**0.78**	**0**		**0.82**	**0.95**
Cars	23	402	38	0		463	27	389	97	0		513	58	4	34	0		96	28	8	26	0		62	1134
% Cars	76.7	82.7	86.4	0		82.7	84.4	82.1	89	0		83.4	85.3	80	94.4	0		88.1	82.4	80	83.9	0		82.7	83.4
Medium Trucks	7	77	6	0		90	5	80	12	0		97	10	1	2	0		13	6	2	5	0		13	213
% Medium Trucks	23.3	15.8	13.6	0		16.1	15.6	16.9	11	0		15.8	14.7	20	5.6	0		11.9	17.6	20	16.1	0		17.3	15.7
Heavy Trucks	0	7	0	0		7	0	5	0	0		5	0	0	0	0		0	0	0	0	0		0	12
% Heavy Trucks	0	1.4	0	0		1.3	0	1.1	0	0		0.8	0	0	0	0		0	0	0	0	0		0	0.9
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					3	-					3	-					3	-	10
% Peds					10	-					30	-					30	-					30	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:30:00
To:	19:00:00	To:	17:30:00

Intersection: Malden Rd & Orford St-Elmdale Ave
Site ID: 1925700002
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	757	437	1194
MT	102	77	179
HT	2	5	7
Bicycles	0	0	0
	861	**519**	**1380**

Malden Rd

Bicycles	0	0	0	0
HT	0	2	0	0
MT	5	87	10	0
Cars	51	643	63	0
Totals	**56**	**732**	**73**	**0**

East Approach

	Out	In	Total
Cars	113	165	278
MT	21	24	45
HT	0	0	0
Bicycles	0	0	0
	134	**189**	**323**

Orford St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	7	28	**35**
0	0	1	12	**13**
0	1	1	26	**28**

Peds: 0



Peds: 3

Peds: 0

Peds: 3

Elmdale Ave

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
29	24	5	0	0
6	5	1	0	0
99	84	15	0	0

West Approach

	Out	In	Total
Cars	66	77	143
MT	9	9	18
HT	1	0	1
Bicycles	0	0	0
	76	**86**	**162**

Malden Rd

Totals	**24**	**455**	**103**	**0**
Cars	21	385	90	0
MT	3	65	13	0
HT	0	5	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	496	753	1249
MT	81	103	184
HT	5	3	8
Bicycles	0	0	0
	582	**859**	**1441**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Orford St-Elmdale Ave
Count Date: Aug 01, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Elmdale Ave						West Approach Orford St						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
16:30	22	188	10	0	0	220	5	123	25	0	1	153	27	2	7	0	1	36	5	4	5	0	0	14	423
16:45	19	187	17	0	0	223	5	117	21	0	2	143	21	1	6	0	1	28	11	2	9	0	0	22	416
17:00	14	190	13	0	0	217	10	113	31	0	0	154	27	1	7	0	0	35	9	0	8	0	0	17	423
17:15	18	167	16	0	0	201	4	102	26	0	0	132	24	2	9	0	1	35	10	7	6	0	0	23	391
Grand Total	**73**	**732**	**56**	**0**	**0**	**861**	**24**	**455**	**103**	**0**	**3**	**582**	**99**	**6**	**29**	**0**	**3**	**134**	**35**	**13**	**28**	**0**	**0**	**76**	**1653**
Approach %	8.5	85	6.5	0		-	4.1	78.2	17.7	0		-	73.9	4.5	21.6	0		-	46.1	17.1	36.8	0		-	
Totals %	4.4	44.3	3.4	0		52.1	1.5	27.5	6.2	0		35.2	6	0.4	1.8	0		8.1	2.1	0.8	1.7	0		4.6	
PHF	**0.83**	**0.96**	**0.82**	**0**		**0.97**	**0.6**	**0.92**	**0.83**	**0**		**0.94**	**0.92**	**0.75**	**0.81**	**0**		**0.93**	**0.8**	**0.46**	**0.78**	**0**		**0.83**	**0.98**
Cars	63	643	51	0		757	21	385	90	0		496	84	5	24	0		113	28	12	26	0		66	1432
% Cars	86.3	87.8	91.1	0		87.9	87.5	84.6	87.4	0		85.2	84.8	83.3	82.8	0		84.3	80	92.3	92.9	0		86.8	86.6
Medium Trucks	10	87	5	0		102	3	65	13	0		81	15	1	5	0		21	7	1	1	0		9	213
% Medium Trucks	13.7	11.9	8.9	0		11.8	12.5	14.3	12.6	0		13.9	15.2	16.7	17.2	0		15.7	20	7.7	3.6	0		11.8	12.9
Heavy Trucks	0	2	0	0		2	0	5	0	0		5	0	0	0	0		0	0	0	1	0		1	8
% Heavy Trucks	0	0.3	0	0		0.2	0	1.1	0	0		0.9	0	0	0	0		0	0	0	3.6	0		1.3	0.5
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					3	-					3	-					0	-	6
% Peds					0	-					50	-					50	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

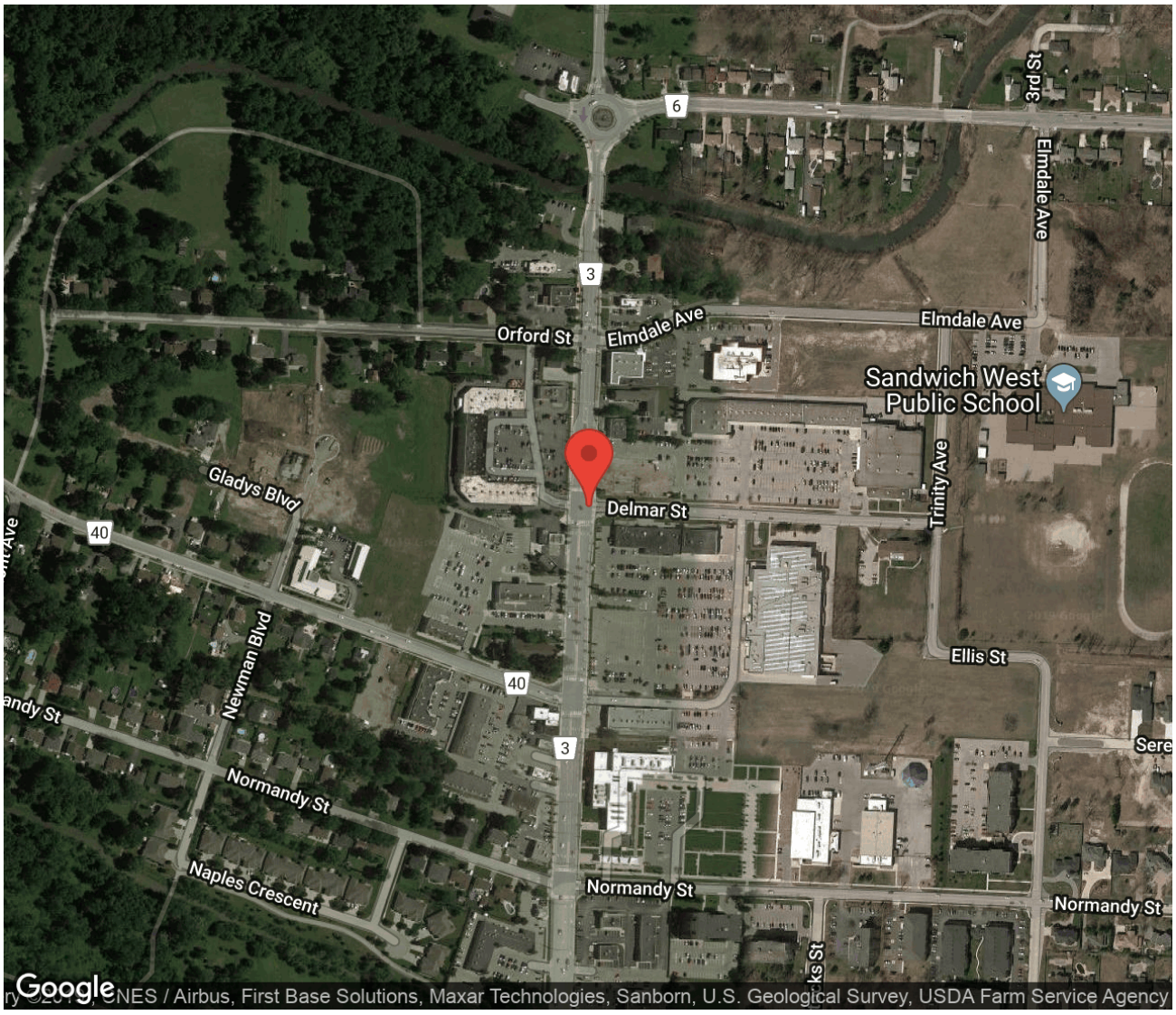
Intersection Count Report

Intersection:	Malden Rd & Delmar St-Commercial Access
Municipality:	LaSalle
Count Date:	Aug 01, 2019
Site Code:	1925700003
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	31	227	4	0	262	1	26	472	33	0	531	2
08:00 - 09:00	37	313	12	0	362	0	40	545	64	0	649	2
09:00 - 10:00	73	337	26	0	436	2	63	512	67	0	642	7
BREAK												
12:00 - 13:00	110	433	46	0	589	1	104	514	108	0	726	6
13:00 - 14:00	65	423	35	0	523	0	60	498	113	0	671	3
BREAK												
16:00 - 17:00	108	655	46	0	809	0	91	508	119	0	718	2
17:00 - 18:00	96	671	43	0	810	2	88	474	104	0	666	2
18:00 - 19:00	69	446	62	0	577	2	110	449	103	0	662	1
GRAND TOTAL	**589**	**3505**	**274**	**0**	**4368**	**8**	**582**	**3972**	**711**	**0**	**5265**	**25**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

Delmar St - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	26	4	24	0	54	1	6	4	3	0	13	2
08:00 - 09:00	40	6	38	0	84	4	14	5	13	0	32	5
09:00 - 10:00	50	13	30	0	93	3	18	12	21	0	51	5
BREAK												
12:00 - 13:00	141	22	58	0	221	4	31	38	79	0	148	5
13:00 - 14:00	92	21	38	0	151	7	25	27	66	0	118	3
BREAK												
16:00 - 17:00	167	34	53	0	254	5	39	30	85	0	154	1
17:00 - 18:00	149	25	47	0	221	4	28	31	80	0	139	2
18:00 - 19:00	127	27	43	0	197	3	30	21	76	0	127	2
GRAND TOTAL	**792**	**152**	**331**	**0**	**1275**	**31**	**191**	**168**	**423**	**0**	**782**	**25**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	3	48	0	0	51	1	6	0	0	7	0	1	0	0	1	0	0	0	0	0	1
07:15	5	42	2	0	49	2	13	0	0	15	1	1	0	0	2	0	0	0	0	0	0
07:30	9	39	1	0	49	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0
07:45	6	49	1	0	56	0	15	0	0	15	4	2	0	0	6	0	0	0	0	0	0
08:00	3	62	2	0	67	0	12	0	0	12	0	1	0	0	1	0	0	0	0	0	0
08:15	8	53	1	0	62	1	19	0	0	20	0	2	0	0	2	0	0	0	0	0	0
08:30	9	62	2	0	73	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	0
08:45	15	74	7	0	96	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
09:00	14	56	7	0	77	1	16	0	0	17	1	2	0	0	3	0	0	0	0	0	0
09:15	17	74	4	0	95	0	17	1	0	18	2	2	0	0	4	0	0	0	0	0	1
09:30	12	65	6	0	83	5	15	1	0	21	0	1	0	0	1	0	0	0	0	0	1
09:45	20	72	7	0	99	0	16	0	0	16	1	1	0	0	2	0	0	0	0	0	0
SUBTOTAL	121	696	40	0	857	11	166	2	0	179	9	15	0	0	24	0	0	0	0	0	3

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	32	96	10	0	138	4	17	2	0	23	0	1	0	0	1	0	0	0	0	0	0
12:15	22	85	14	0	121	3	19	3	0	25	0	1	0	0	1	0	0	0	0	0	0
12:30	22	81	8	0	111	3	13	4	0	20	1	0	0	0	1	0	0	0	0	0	1
12:45	18	99	5	0	122	3	19	0	0	22	2	2	0	0	4	0	0	0	0	0	0
13:00	13	89	9	0	111	1	19	0	0	20	0	0	0	0	0	0	0	0	0	0	0
13:15	16	86	12	0	114	1	9	0	0	10	0	2	0	0	2	0	0	0	0	0	0
13:30	15	94	6	0	115	3	17	0	0	20	0	1	0	0	1	0	0	0	0	0	0
13:45	13	83	8	0	104	3	20	0	0	23	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	151	713	72	0	936	21	133	9	0	163	3	10	0	0	13	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	18	115	10	0	143	2	24	0	0	26	0	0	0	0	0	0	0	0	0	0	0
16:15	24	138	9	0	171	7	27	2	0	36	0	1	0	0	1	0	0	0	0	0	0
16:30	20	153	6	0	179	0	32	3	0	35	0	1	0	0	1	0	0	0	0	0	0
16:45	34	141	14	0	189	3	22	2	0	27	0	1	0	0	1	0	0	0	0	0	0
17:00	30	159	11	0	200	0	22	2	0	24	0	0	0	0	0	0	0	0	0	0	1
17:15	17	155	9	0	181	3	19	1	0	23	0	1	0	0	1	0	0	0	0	0	0
17:30	20	125	7	0	152	4	16	3	0	23	0	0	0	0	0	0	0	0	0	0	1
17:45	20	140	9	0	169	2	33	1	0	36	0	1	0	0	1	0	0	0	0	0	0
18:00	14	107	18	0	139	1	22	4	0	27	0	0	0	0	0	0	0	0	0	0	0
18:15	19	108	12	0	139	3	16	3	0	22	0	1	0	0	1	0	0	0	0	0	1
18:30	20	79	12	0	111	2	17	2	0	21	0	0	0	0	0	0	0	0	0	0	0
18:45	9	86	11	0	106	1	9	0	0	10	0	1	0	0	1	0	0	0	0	0	1
SUBTOTAL	245	1506	128	0	1879	28	259	23	0	310	0	7	0	0	7	0	0	0	0	0	4
GRAND TOTAL	517	2915	240	0	3672	60	558	34	0	652	12	32	0	0	44	0	0	0	0	0	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	76	2	0	80	1	19	0	0	20	0	0	1	0	1	0	0	0	0	0	1
07:15	6	79	6	0	91	1	20	0	0	21	0	1	0	0	1	0	0	0	0	0	0
07:30	4	106	7	0	117	2	17	0	0	19	0	2	1	0	3	0	0	0	0	0	1
07:45	10	122	13	0	145	0	29	3	0	32	0	1	0	0	1	0	0	0	0	0	0
08:00	5	113	7	0	125	1	17	3	0	21	0	2	1	0	3	0	0	0	0	0	0
08:15	6	124	8	0	138	1	22	1	0	24	0	0	0	0	0	0	0	0	0	0	0
08:30	11	114	13	0	138	0	20	3	0	23	0	1	0	0	1	0	0	0	0	0	0
08:45	13	112	25	0	150	3	20	2	0	25	0	0	1	0	1	0	0	0	0	0	2
09:00	24	105	14	0	143	1	20	2	0	23	0	1	0	0	1	0	0	0	0	0	1
09:15	12	93	17	0	122	0	18	2	0	20	0	0	0	0	0	0	0	0	0	0	1
09:30	10	125	10	0	145	1	23	3	0	27	0	1	1	0	2	0	0	0	0	0	4
09:45	14	101	16	0	131	1	25	2	0	28	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	117	1270	138	0	1525	12	250	21	0	283	0	9	5	0	14	0	0	0	0	0	11

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	27	104	21	0	152	4	18	10	0	32	0	3	0	0	3	0	0	0	0	0	2
12:15	22	120	30	0	172	5	24	5	0	34	0	0	0	0	0	0	0	0	0	0	3
12:30	16	103	18	0	137	7	13	1	0	21	0	1	0	0	1	0	0	0	0	0	1
12:45	16	102	22	0	140	7	26	1	0	34	0	0	0	0	0	0	0	0	0	0	0
13:00	9	120	24	0	153	2	15	1	0	18	0	1	0	0	1	0	0	0	0	0	1
13:15	14	114	33	0	161	3	13	7	0	23	0	0	2	0	2	0	0	0	0	0	0
13:30	15	95	18	0	128	2	17	4	0	23	0	1	0	0	1	0	0	0	0	0	2
13:45	14	104	24	0	142	1	16	0	0	17	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	133	862	190	0	1185	31	142	29	0	202	0	8	2	0	10	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	29	107	19	0	155	4	23	5	0	32	0	2	0	0	2	0	0	0	0	0	2
16:15	16	98	32	0	146	6	21	1	0	28	1	0	1	0	2	0	0	0	0	0	0
16:30	12	119	25	0	156	6	16	5	0	27	0	2	0	0	2	0	0	0	0	0	0
16:45	13	104	30	0	147	4	15	1	0	20	0	1	0	0	1	0	0	0	0	0	0
17:00	17	114	26	0	157	4	24	2	0	30	0	1	1	0	2	0	0	0	0	0	1
17:15	14	102	20	0	136	4	16	3	0	23	0	0	0	0	0	0	0	0	0	0	0
17:30	26	104	20	0	150	4	8	2	0	14	0	2	0	0	2	0	0	0	0	0	1
17:45	18	87	28	0	133	1	16	1	0	18	0	0	1	0	1	0	0	0	0	0	0
18:00	23	107	20	0	150	5	16	3	0	24	0	2	0	0	2	0	0	0	0	0	1
18:15	20	105	20	0	145	6	15	0	0	21	0	0	0	0	0	0	0	0	0	0	0
18:30	25	92	24	0	141	6	18	1	0	25	0	1	1	0	2	0	0	0	0	0	0
18:45	20	84	33	0	137	5	9	1	0	15	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	233	1223	297	0	1753	55	197	25	0	277	1	11	4	0	16	0	0	0	0	0	5
GRAND TOTAL	483	3355	625	0	4463	98	589	75	0	762	1	28	11	0	40	0	0	0	0	0	25

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Delmar St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	7	2	5	0	14	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:15	4	1	2	0	7	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
07:30	5	0	8	0	13	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0
07:45	6	0	8	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	5	0	6	0	11	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0
08:15	8	2	4	0	14	1	0	1	0	2	0	0	3	0	3	0	0	0	0	0	0
08:30	8	2	9	0	19	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	3
08:45	12	2	9	0	23	3	0	1	0	4	1	0	1	0	2	0	0	0	0	0	1
09:00	13	5	2	0	20	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
09:15	7	3	10	0	20	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
09:30	8	2	8	0	18	3	1	0	0	4	1	0	1	0	2	0	0	0	0	0	1
09:45	13	2	5	0	20	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	96	21	76	0	193	16	1	9	0	26	4	1	7	0	12	0	0	0	0	0	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Delmar St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	31	7	12	0	50	5	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0
12:15	24	4	11	0	39	10	1	2	0	13	0	0	0	0	0	0	0	0	0	0	0
12:30	30	7	13	0	50	7	1	3	0	11	1	0	0	0	1	0	0	0	0	0	4
12:45	27	2	12	0	41	6	0	2	0	8	0	0	1	0	1	0	0	0	0	0	0
13:00	28	5	8	0	41	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	3
13:15	23	7	9	0	39	2	2	1	0	5	1	0	0	0	1	0	0	0	0	0	1
13:30	15	2	8	0	25	2	1	2	0	5	1	0	0	0	1	0	0	0	0	0	2
13:45	16	3	7	0	26	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	194	37	80	0	311	36	6	14	0	56	3	0	2	0	5	0	0	0	0	0	11

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Delmar St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	37	6	9	0	52	4	0	4	0	8	0	0	1	0	1	0	0	0	0	0	0
16:15	36	7	9	0	52	2	2	1	0	5	2	0	0	0	2	0	0	0	0	0	3
16:30	30	9	8	0	47	8	1	2	0	11	0	0	1	0	1	0	0	0	0	0	1
16:45	43	8	16	0	67	5	1	2	0	8	0	0	0	0	0	0	0	0	0	0	1
17:00	38	9	12	0	59	4	0	1	0	5	1	0	0	0	1	0	0	0	0	0	1
17:15	39	7	9	0	55	3	2	1	0	6	0	0	0	0	0	0	0	0	0	0	1
17:30	27	4	9	0	40	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	2
17:45	28	2	11	0	41	7	1	1	0	9	1	0	0	0	1	0	0	0	0	0	0
18:00	27	8	13	0	48	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	2
18:15	19	4	4	0	27	3	1	2	0	6	0	0	0	0	0	0	0	0	0	0	1
18:30	38	5	8	0	51	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0
18:45	26	6	15	0	47	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	388	75	123	0	586	50	11	18	0	79	5	0	2	0	7	0	0	0	0	0	12
GRAND TOTAL	678	133	279	0	1090	102	18	41	0	161	12	1	11	0	24	0	0	0	0	0	31

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	1	1	1	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45	3	2	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	2	1	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15	2	0	4	0	6	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
08:30	3	3	2	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	6	0	4	0	10	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:00	6	2	4	0	12	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:15	5	1	5	0	11	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
09:30	2	4	7	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:45	4	4	5	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	35	19	36	0	90	3	2	1	0	6	0	0	0	0	0	0	0	0	0	0	12

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	4	9	20	0	33	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	3
12:15	9	9	19	0	37	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1
12:30	11	6	18	0	35	1	4	3	0	8	0	0	0	0	0	0	0	0	0	0	1
12:45	4	9	14	0	27	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13:00	4	4	20	0	28	1	1	3	0	5	0	0	0	0	0	0	0	0	0	0	0
13:15	7	6	8	0	21	3	1	2	0	6	0	0	0	0	0	0	0	0	0	0	0
13:30	3	9	18	0	30	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	1
13:45	5	5	8	0	18	1	1	5	0	7	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	47	57	125	0	229	9	8	20	0	37	0	0	0	0	0	0	0	0	0	0	8

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Delmar St-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	13	5	16	0	34	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0
16:15	8	7	20	0	35	2	1	4	0	7	0	0	0	0	0	0	0	0	0	0	1
16:30	6	8	18	0	32	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0
16:45	8	8	12	0	28	0	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0
17:00	3	9	19	0	31	2	1	5	0	8	0	0	0	0	0	0	0	0	0	0	2
17:15	4	6	14	0	24	2	3	2	0	7	0	0	0	0	0	0	0	0	0	0	0
17:30	6	4	18	0	28	2	2	4	0	8	0	0	0	0	0	0	0	0	0	0	0
17:45	8	5	17	0	30	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0
18:00	7	4	19	0	30	3	1	4	0	8	0	0	0	0	0	0	0	0	0	0	0
18:15	8	2	20	0	30	1	2	4	0	7	0	0	0	0	0	0	0	0	0	0	1
18:30	3	5	16	0	24	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
18:45	7	7	7	0	21	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	81	70	196	0	347	16	12	45	0	73	0	0	0	0	0	0	0	0	0	0	5
GRAND TOTAL	163	146	357	0	666	28	22	66	0	116	0	0	0	0	0	0	0	0	0	0	25

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:45:00
To:	10:00:00	To:	09:45:00

Intersection: Malden Rd & Delmar St-Commercial Access
Site ID: 1925700003
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	351	483	834
MT	74	84	158
HT	9	5	14
Bicycles	0	0	0
	434	**572**	**1006**

Malden Rd

Bicycles	0	0	0	0
HT	0	6	3	0
MT	2	66	6	0
Cars	24	269	58	0
Totals	**26**	**341**	**67**	**0**

East Approach

	Out	In	Total
Cars	81	131	212
MT	12	16	28
HT	5	5	10
Bicycles	0	0	0
	98	**152**	**250**

Commercial Access

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	1	19	**20**
0	0	1	7	**8**
0	0	1	20	**21**

Peds: 4

Peds: 2

Peds: 3

Peds: 8

Delmar St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
34	29	2	3	0
13	12	1	0	0
51	40	9	2	0

West Approach

	Out	In	Total
Cars	46	95	141
MT	3	8	11
HT	0	0	0
Bicycles	0	0	0
	49	**103**	**152**

Malden Rd

Totals	**64**	**518**	**77**	**0**
Cars	59	435	66	0
MT	5	81	9	0
HT	0	2	2	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	560	329	889
MT	95	76	171
HT	4	8	12
Bicycles	0	0	0
	659	**413**	**1072**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Delmar St-Commercial Access
Count Date: Aug 01, 2019
Period: 07:00 - 10:00

Peak Hour Data (08:45 - 09:45)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Delmar St						West Approach Commercial Access						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:45	15	93	7	0	0	115	16	132	28	0	2	176	16	2	11	0	1	29	6	0	5	0	0	11	331
09:00	16	74	7	0	0	97	25	126	16	0	1	167	16	5	2	0	1	23	6	3	4	0	0	13	300
09:15	19	93	5	0	1	117	12	111	19	0	1	142	7	3	12	0	0	22	6	1	5	0	1	12	293
09:30	17	81	7	0	1	105	11	149	14	0	4	174	12	3	9	0	1	24	2	4	7	0	3	13	316
Grand Total	**67**	**341**	**26**	**0**	**2**	**434**	**64**	**518**	**77**	**0**	**8**	**659**	**51**	**13**	**34**	**0**	**3**	**98**	**20**	**8**	**21**	**0**	**4**	**49**	**1240**
Approach %	15.4	78.6	6	0		-	9.7	78.6	11.7	0		-	52	13.3	34.7	0		-	40.8	16.3	42.9	0		-	
Totals %	5.4	27.5	2.1	0		35	5.2	41.8	6.2	0		53.1	4.1	1	2.7	0		7.9	1.6	0.6	1.7	0		4	
PHF	**0.88**	**0.92**	**0.93**	**0**		**0.93**	**0.64**	**0.87**	**0.69**	**0**		**0.94**	**0.8**	**0.65**	**0.71**	**0**		**0.84**	**0.83**	**0.5**	**0.75**	**0**		**0.94**	**0.94**
Cars	58	269	24	0		351	59	435	66	0		560	40	12	29	0		81	19	7	20	0		46	1038
% Cars	86.6	78.9	92.3	0		80.9	92.2	84	85.7	0		85	78.4	92.3	85.3	0		82.7	95	87.5	95.2	0		93.9	83.7
Medium Trucks	6	66	2	0		74	5	81	9	0		95	9	1	2	0		12	1	1	1	0		3	184
% Medium Trucks	9	19.4	7.7	0		17.1	7.8	15.6	11.7	0		14.4	17.6	7.7	5.9	0		12.2	5	12.5	4.8	0		6.1	14.8
Heavy Trucks	3	6	0	0		9	0	2	2	0		4	2	0	3	0		5	0	0	0	0		0	18
% Heavy Trucks	4.5	1.8	0	0		2.1	0	0.4	2.6	0		0.6	3.9	0	8.8	0		5.1	0	0	0	0		0	1.5
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					2	-					8	-					3	-					4	-	17
% Peds					11.8	-					47.1	-					17.6	-					23.5	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Delmar St-Commercial Access
Site ID: 1925700003
Count Date: Aug 01, 2019
Weather conditions:

**** Signalized Intersection ****
Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	492	505	997
MT	90	93	183
HT	7	5	12
Bicycles	0	0	0
	589	**603**	**1192**

Malden Rd

Bicycles	0	0	0	0
HT	0	4	3	0
MT	9	68	13	0
Cars	37	361	94	0
Totals	**46**	**433**	**110**	**0**

Peds: 1

East Approach

	Out	In	Total
Cars	180	218	398
MT	39	35	74
HT	2	3	5
Bicycles	0	0	0
	221	**256**	**477**

Commercial Access

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	3	28	**31**
0	0	5	33	**38**
0	0	8	71	**79**

Peds: 5



Peds: 4

Delmar St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
58	48	9	1	0
22	20	2	0	0
141	112	28	1	0

Peds: 6

West Approach

	Out	In	Total
Cars	132	138	270
MT	16	34	50
HT	0	0	0
Bicycles	0	0	0
	148	**172**	**320**

Totals	**104**	**514**	**108**	**0**
Cars	81	429	91	0
MT	23	81	17	0
HT	0	4	0	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	601	544	1145
MT	121	104	225
HT	4	5	9
Bicycles	0	0	0
	726	**653**	**1379**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Delmar St-Commercial Access
Count Date: Aug 01, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Delmar St						West Approach Commercial Access						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	36	114	12	0	0	162	31	125	31	0	2	187	36	7	14	0	0	57	5	10	22	0	3	37	443
12:15	25	105	17	0	0	147	27	144	35	0	3	206	34	5	13	0	0	52	9	9	22	0	1	40	445
12:30	26	94	12	0	1	132	23	117	19	0	1	159	38	8	16	0	4	62	12	10	21	0	1	43	396
12:45	23	120	5	0	0	148	23	128	23	0	0	174	33	2	15	0	0	50	5	9	14	0	0	28	400
Grand Total	**110**	**433**	**46**	**0**	**1**	**589**	**104**	**514**	**108**	**0**	**6**	**726**	**141**	**22**	**58**	**0**	**4**	**221**	**31**	**38**	**79**	**0**	**5**	**148**	**1684**
Approach %	18.7	73.5	7.8	0		-	14.3	70.8	14.9	0		-	63.8	10	26.2	0		-	20.9	25.7	53.4	0		-	
Totals %	6.5	25.7	2.7	0		35	6.2	30.5	6.4	0		43.1	8.4	1.3	3.4	0		13.1	1.8	2.3	4.7	0		8.8	
PHF	**0.76**	**0.9**	**0.68**	**0**		**0.91**	**0.84**	**0.89**	**0.77**	**0**		**0.88**	**0.93**	**0.69**	**0.91**	**0**		**0.89**	**0.65**	**0.95**	**0.9**	**0**		**0.86**	**0.95**
Cars	94	361	37	0		492	81	429	91	0		601	112	20	48	0		180	28	33	71	0		132	1405
% Cars	85.5	83.4	80.4	0		83.5	77.9	83.5	84.3	0		82.8	79.4	90.9	82.8	0		81.4	90.3	86.8	89.9	0		89.2	83.4
Medium Trucks	13	68	9	0		90	23	81	17	0		121	28	2	9	0		39	3	5	8	0		16	266
% Medium Trucks	11.8	15.7	19.6	0		15.3	22.1	15.8	15.7	0		16.7	19.9	9.1	15.5	0		17.6	9.7	13.2	10.1	0		10.8	15.8
Heavy Trucks	3	4	0	0		7	0	4	0	0		4	1	0	1	0		2	0	0	0	0		0	13
% Heavy Trucks	2.7	0.9	0	0		1.2	0	0.8	0	0		0.6	0.7	0	1.7	0		0.9	0	0	0	0		0	0.8
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					6	-					4	-					5	-	16
% Peds					6.3	-					37.5	-					25	-					31.3	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:15:00
To:	19:00:00	To:	17:15:00

Intersection: Malden Rd & Delmar St-Commercial Access
Site ID: 1925700003
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	739	505	1244
MT	122	88	210
HT	3	5	8
Bicycles	0	0	0
	864	**598**	**1462**

Malden Rd

Bicycles	0	0	0	0
HT	0	3	0	0
MT	9	103	10	0
Cars	40	591	108	0
Totals	**49**	**697**	**118**	**0**

East Approach

	Out	In	Total
Cars	225	253	478
MT	29	22	51
HT	4	2	6
Bicycles	0	0	0
	258	**277**	**535**

Commercial Access

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	6	25	**31**
0	0	3	32	**35**
0	0	18	69	**87**

Peds: 3



Peds: 6

Peds: 1

Peds: 1

Delmar St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
52	45	6	1	0
37	33	4	0	0
169	147	19	3	0

West Approach

	Out	In	Total
Cars	126	131	257
MT	27	33	60
HT	0	1	1
Bicycles	0	0	0
	153	**165**	**318**

Malden Rd

Totals	**79**	**515**	**124**	**0**
Cars	58	435	113	0
MT	20	76	9	0
HT	1	4	2	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	606	807	1413
MT	105	140	245
HT	7	6	13
Bicycles	0	0	0
	718	**953**	**1671**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Delmar St-Commercial Access
Count Date: Aug 01, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Delmar St						West Approach Commercial Access						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:15	31	166	11	0	0	208	23	119	34	0	0	176	40	9	10	0	3	59	10	8	24	0	1	42	485
16:30	20	186	9	0	0	215	18	137	30	0	0	185	38	10	11	0	1	59	8	8	23	0	0	39	498
16:45	37	164	16	0	0	217	17	120	31	0	0	168	48	9	18	0	1	75	8	9	16	0	0	33	493
17:00	30	181	13	0	1	224	21	139	29	0	1	189	43	9	13	0	1	65	5	10	24	0	2	39	517
Grand Total	**118**	**697**	**49**	**0**	**1**	**864**	**79**	**515**	**124**	**0**	**1**	**718**	**169**	**37**	**52**	**0**	**6**	**258**	**31**	**35**	**87**	**0**	**3**	**153**	**1993**
Approach %	13.7	80.7	5.7	0		-	11	71.7	17.3	0		-	65.5	14.3	20.2	0		-	20.3	22.9	56.9	0		-	
Totals %	5.9	35	2.5	0		43.4	4	25.8	6.2	0		36	8.5	1.9	2.6	0		12.9	1.6	1.8	4.4	0		7.7	
PHF	**0.8**	**0.94**	**0.77**	**0**		**0.96**	**0.86**	**0.93**	**0.91**	**0**		**0.95**	**0.88**	**0.93**	**0.72**	**0**		**0.86**	**0.78**	**0.88**	**0.91**	**0**		**0.91**	**0.96**
Cars	108	591	40	0		739	58	435	113	0		606	147	33	45	0		225	25	32	69	0		126	1696
% Cars	91.5	84.8	81.6	0		85.5	73.4	84.5	91.1	0		84.4	87	89.2	86.5	0		87.2	80.6	91.4	79.3	0		82.4	85.1
Medium Trucks	10	103	9	0		122	20	76	9	0		105	19	4	6	0		29	6	3	18	0		27	283
% Medium Trucks	8.5	14.8	18.4	0		14.1	25.3	14.8	7.3	0		14.6	11.2	10.8	11.5	0		11.2	19.4	8.6	20.7	0		17.6	14.2
Heavy Trucks	0	3	0	0		3	1	4	2	0		7	3	0	1	0		4	0	0	0	0		0	14
% Heavy Trucks	0	0.4	0	0		0.3	1.3	0.8	1.6	0		1	1.8	0	1.9	0		1.6	0	0	0	0		0	0.7
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					1	-					6	-					3	-	11
% Peds					9.1	-					9.1	-					54.5	-					27.3	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

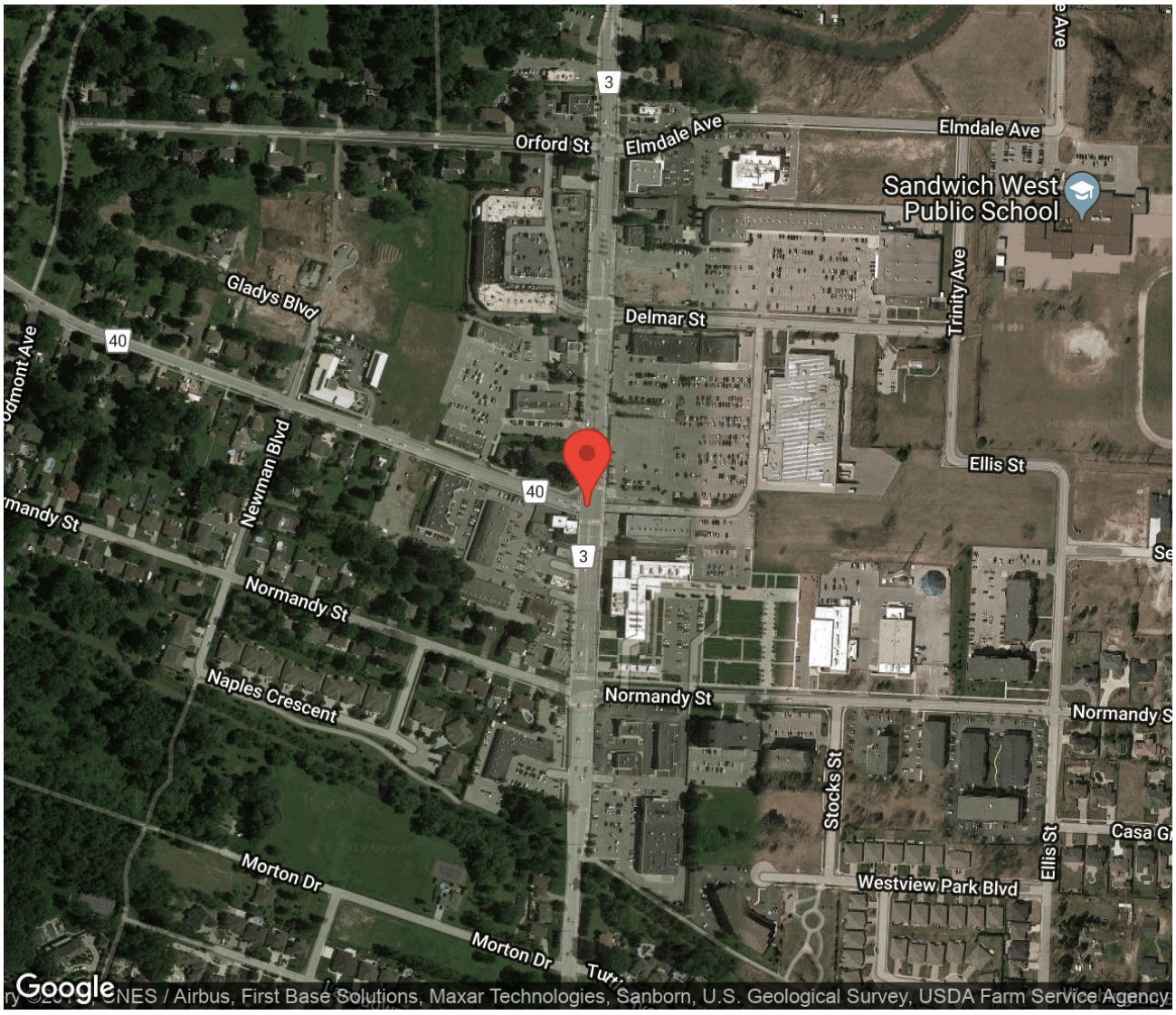
Intersection Count Report

Intersection:	Malden Rd & Sprucewood Ave-Commercial Access
Municipality:	LaSalle
Count Date:	Aug 01, 2019
Site Code:	1925700004
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Traffic Count Map

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Intersection:	Malden Rd & Sprucewood Ave-Commercial Access
Municipality:	LaSalle
Count Date:	Aug 01, 2019



Traffic Count Summary

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	6	148	100	0	254	0	102	395	32	0	529	0
08:00 - 09:00	11	251	97	0	359	0	109	467	74	0	650	1
09:00 - 10:00	20	279	123	0	422	4	99	414	90	0	603	2
BREAK												
12:00 - 13:00	38	422	203	0	663	2	106	430	129	0	665	15
13:00 - 14:00	27	394	169	0	590	4	97	396	132	0	625	9
BREAK												
16:00 - 17:00	36	643	224	0	903	2	110	377	100	0	587	6
17:00 - 18:00	38	634	254	0	926	0	114	417	95	0	626	2
18:00 - 19:00	20	497	158	0	675	3	87	387	74	0	548	1
GRAND TOTAL	**196**	**3268**	**1328**	**0**	**4792**	**15**	**824**	**3283**	**726**	**0**	**4833**	**36**

Traffic Count Summary

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

Commercial Access - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	16	6	4	0	26	0	133	14	65	0	212	3
08:00 - 09:00	37	20	7	0	64	4	167	28	56	0	251	3
09:00 - 10:00	64	25	20	0	109	7	202	40	85	0	327	3
BREAK												
12:00 - 13:00	143	111	26	0	280	3	247	103	103	0	453	8
13:00 - 14:00	138	72	23	0	233	6	218	84	106	0	408	7
BREAK												
16:00 - 17:00	171	96	26	0	293	2	281	86	138	0	505	3
17:00 - 18:00	156	85	24	0	265	5	211	64	157	0	432	1
18:00 - 19:00	124	49	20	0	193	7	229	60	144	0	433	3
GRAND TOTAL	**849**	**464**	**150**	**0**	**1463**	**34**	**1688**	**479**	**854**	**0**	**3021**	**31**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	3	38	16	0	57	0	5	2	0	7	0	1	0	0	1	0	0	0	0	0	0
07:15	0	33	15	0	48	0	7	6	0	13	0	1	0	0	1	0	0	0	0	0	0
07:30	0	15	26	0	41	1	6	5	0	12	0	1	1	0	2	0	0	0	0	0	0
07:45	2	28	24	0	54	0	12	4	0	16	0	1	1	0	2	0	0	0	0	0	0
08:00	2	36	16	0	54	0	9	4	0	13	0	2	0	0	2	0	0	0	0	0	0
08:15	3	52	18	0	73	1	13	7	0	21	0	0	2	0	2	0	0	0	0	0	0
08:30	2	51	17	0	70	1	3	2	0	6	0	0	0	0	0	0	0	0	0	0	0
08:45	2	73	17	0	92	0	11	13	0	24	0	1	1	0	2	0	0	0	0	0	0
09:00	3	54	22	0	79	0	8	10	0	18	0	1	1	0	2	0	0	0	0	0	0
09:15	2	60	28	0	90	2	12	6	0	20	0	1	1	0	2	0	0	0	0	0	2
09:30	6	47	26	0	79	0	14	5	0	19	0	2	0	0	2	0	0	0	0	0	0
09:45	7	67	20	0	94	0	13	3	0	16	0	0	1	0	1	0	0	0	0	0	2
SUBTOTAL	32	554	245	0	831	5	113	67	0	185	0	11	8	0	19	0	0	0	0	0	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	6	101	41	0	148	1	15	5	0	21	0	0	1	0	1	0	0	0	0	0	0
12:15	9	89	35	0	133	1	17	14	0	32	1	0	0	0	1	0	0	0	0	0	1
12:30	5	82	49	0	136	1	17	5	0	23	0	1	0	0	1	0	0	0	0	0	1
12:45	12	84	42	0	138	2	16	9	0	27	0	0	2	0	2	0	0	0	0	0	0
13:00	10	88	37	0	135	2	11	11	0	24	0	0	0	0	0	0	0	0	0	0	2
13:15	5	88	35	0	128	0	9	5	0	14	0	2	1	0	3	0	0	0	0	0	1
13:30	5	92	27	0	124	0	11	7	0	18	1	1	0	0	2	0	0	0	0	0	0
13:45	4	72	32	0	108	0	20	11	0	31	0	0	3	0	3	0	0	0	0	0	1
SUBTOTAL	56	696	298	0	1050	7	116	67	0	190	2	4	7	0	13	0	0	0	0	0	6

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	7	129	35	0	171	0	19	11	0	30	0	0	0	0	0	0	0	0	0	0	0
16:15	13	139	49	0	201	1	19	14	0	34	0	1	2	0	3	0	0	0	0	0	0
16:30	6	135	48	0	189	0	37	9	0	46	0	0	0	0	0	0	0	0	0	0	0
16:45	9	140	48	0	197	0	23	7	0	30	0	1	1	0	2	0	0	0	0	0	2
17:00	7	138	70	0	215	1	20	8	0	29	0	1	0	0	1	0	0	0	0	0	0
17:15	9	136	75	0	220	0	15	10	0	25	0	0	1	0	1	0	0	0	0	0	0
17:30	8	136	43	0	187	2	18	5	0	25	0	0	0	0	0	0	0	0	0	0	0
17:45	9	138	37	0	184	2	31	4	0	37	0	1	1	0	2	0	0	0	0	0	0
18:00	4	119	38	0	161	1	22	12	0	35	0	0	0	0	0	0	0	0	0	0	0
18:15	5	108	41	0	154	2	18	3	0	23	0	0	2	0	2	0	0	0	0	0	0
18:30	4	95	31	0	130	1	20	5	0	26	0	1	0	0	1	0	0	0	0	0	1
18:45	3	101	22	0	126	0	13	3	0	16	0	0	1	0	1	0	0	0	0	0	2
SUBTOTAL	84	1514	537	0	2135	10	255	91	0	356	0	5	8	0	13	0	0	0	0	0	5
GRAND TOTAL	172	2764	1080	0	4016	22	484	225	0	731	2	20	23	0	45	0	0	0	0	0	15

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	12	60	4	0	76	1	14	0	0	15	0	0	0	0	0	0	0	0	0	0	0
07:15	17	73	3	0	93	6	12	1	0	19	0	1	0	0	1	0	0	0	0	0	0
07:30	29	85	4	0	118	2	15	2	0	19	1	0	0	0	1	0	0	0	0	0	0
07:45	30	113	15	0	158	4	22	3	0	29	0	0	0	0	0	0	0	0	0	0	0
08:00	31	89	13	0	133	3	16	2	0	21	0	2	0	0	2	0	0	0	0	0	0
08:15	19	107	13	0	139	6	18	3	0	27	0	0	0	0	0	0	0	0	0	0	0
08:30	21	98	23	0	142	3	13	3	0	19	2	0	0	0	2	0	0	0	0	0	1
08:45	21	104	16	0	141	3	19	1	0	23	0	1	0	0	1	0	0	0	0	0	0
09:00	22	87	6	0	115	4	13	1	0	18	0	0	0	0	0	0	0	0	0	0	0
09:15	25	85	23	0	133	3	12	3	0	18	0	0	0	0	0	0	0	0	0	0	0
09:30	18	100	28	0	146	4	15	3	0	22	0	1	0	0	1	0	0	0	0	0	0
09:45	18	83	21	0	122	4	18	4	0	26	1	0	1	0	2	0	0	0	0	0	2
SUBTOTAL	263	1084	169	0	1516	43	187	26	0	256	4	5	1	0	10	0	0	0	0	0	3

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	26	82	33	0	141	8	14	3	0	25	1	2	0	0	3	0	0	0	0	0	5
12:15	25	103	24	0	152	1	24	5	0	30	0	0	0	0	0	0	0	0	0	0	5
12:30	19	84	37	0	140	1	17	4	0	22	1	0	0	0	1	0	0	0	0	0	4
12:45	17	84	20	0	121	7	20	3	0	30	0	0	0	0	0	0	0	0	0	0	1
13:00	19	91	32	0	142	4	6	2	0	12	2	0	0	0	2	0	0	0	0	0	2
13:15	19	99	28	0	146	5	15	7	0	27	1	2	0	0	3	0	0	0	0	0	4
13:30	23	77	22	0	122	3	16	3	0	22	0	0	0	0	0	0	0	0	0	0	0
13:45	17	81	33	0	131	4	9	5	0	18	0	0	0	0	0	0	0	0	0	0	3
SUBTOTAL	165	701	229	0	1095	33	121	32	0	186	5	4	0	0	9	0	0	0	0	0	24

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	24	81	20	0	125	3	18	3	0	24	0	1	0	0	1	0	0	0	0	0	0
16:15	25	81	27	0	133	4	13	1	0	18	0	2	0	0	2	0	0	0	0	0	2
16:30	20	69	22	0	111	1	14	2	0	17	0	1	0	0	1	0	0	0	0	0	1
16:45	25	87	21	0	133	8	9	4	0	21	0	1	0	0	1	0	0	0	0	0	3
17:00	24	101	26	0	151	6	17	5	0	28	0	1	0	0	1	0	0	0	0	0	2
17:15	29	86	13	0	128	2	12	3	0	17	1	0	0	0	1	0	0	0	0	0	0
17:30	16	84	17	0	117	3	11	3	0	17	0	1	0	0	1	0	0	0	0	0	0
17:45	28	90	26	0	144	5	13	2	0	20	0	1	0	0	1	0	0	0	0	0	0
18:00	19	84	20	0	123	3	16	2	0	21	0	0	0	0	0	0	0	0	0	0	1
18:15	20	89	17	0	126	3	15	3	0	21	0	0	0	0	0	0	0	0	0	0	0
18:30	17	75	9	0	101	3	11	4	0	18	0	1	0	0	1	0	0	0	0	0	0
18:45	21	86	15	0	122	1	10	4	0	15	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	268	1013	233	0	1514	42	159	36	0	237	1	9	0	0	10	0	0	0	0	0	9
GRAND TOTAL	696	2798	631	0	4125	118	467	94	0	679	10	18	1	0	29	0	0	0	0	0	36

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	1	2	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	3	0	1	0	4	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
07:45	6	3	1	0	10	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:00	4	4	3	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	6	3	1	0	10	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
08:30	9	5	0	0	14	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	4
08:45	8	5	2	0	15	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0
09:00	12	3	5	0	20	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	2
09:15	13	6	2	0	21	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
09:30	12	5	3	0	20	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
09:45	16	9	8	0	33	5	1	1	0	7	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	93	45	28	0	166	24	6	3	0	33	0	0	0	0	0	0	0	0	0	0	11

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	32	25	7	0	64	3	2	2	0	7	0	0	0	0	0	0	0	0	0	0	0
12:15	28	24	3	0	55	5	6	1	0	12	0	0	0	0	0	0	0	0	0	0	0
12:30	37	16	5	0	58	2	8	0	0	10	0	0	0	0	0	0	0	0	0	0	2
12:45	34	20	6	0	60	2	10	2	0	14	0	0	0	0	0	0	0	0	0	0	1
13:00	24	19	5	0	48	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	1
13:15	32	11	6	0	49	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2
13:30	37	15	4	0	56	8	1	1	0	10	0	0	0	0	0	0	0	0	0	0	3
13:45	26	24	6	0	56	5	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	250	154	42	0	446	31	29	7	0	67	0	0	0	0	0	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	37	23	3	0	63	5	3	0	0	8	0	0	0	0	0	0	0	0	0	0	0
16:15	32	13	6	0	51	4	4	1	0	9	0	1	0	0	1	0	0	0	0	0	1
16:30	39	24	10	0	73	5	1	1	0	7	0	0	0	0	0	0	0	0	0	0	0
16:45	42	24	5	0	71	7	3	0	0	10	0	0	0	0	0	0	0	0	0	0	1
17:00	31	20	9	0	60	6	3	2	0	11	0	0	0	0	0	0	0	0	0	0	3
17:15	40	27	4	0	71	8	2	0	0	10	0	0	0	0	0	0	0	0	0	0	0
17:30	29	12	6	0	47	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	2
17:45	34	16	3	0	53	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	0
18:00	26	16	3	0	45	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0	2
18:15	32	6	4	0	42	7	2	0	0	9	0	0	0	0	0	0	0	0	0	0	2
18:30	26	7	6	0	39	2	1	2	0	5	0	0	0	0	0	0	0	0	0	0	1
18:45	27	13	3	0	43	2	2	2	0	6	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	395	201	62	0	658	56	28	8	0	92	0	1	0	0	1	0	0	0	0	0	14
GRAND TOTAL	738	400	132	0	1270	111	63	18	0	192	0	1	0	0	1	0	0	0	0	0	34

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Sprucewood Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	17	4	12	0	33	6	0	1	0	7	1	0	0	0	1	0	0	0	0	0	0
07:15	18	0	16	0	34	8	1	4	0	13	1	0	0	0	1	0	0	0	0	0	0
07:30	33	2	9	0	44	6	1	3	0	10	2	0	1	0	3	0	0	0	0	0	2
07:45	30	6	13	0	49	10	0	6	0	16	1	0	0	0	1	0	0	0	0	0	1
08:00	28	1	12	0	41	5	0	3	0	8	1	0	1	0	2	0	0	0	0	0	1
08:15	32	7	6	0	45	6	1	5	0	12	0	0	0	0	0	0	0	0	0	0	0
08:30	40	7	11	0	58	9	0	2	0	11	1	0	0	0	1	0	0	0	0	0	1
08:45	39	12	13	0	64	5	0	2	0	7	1	0	1	0	2	0	0	0	0	0	1
09:00	50	7	14	0	71	8	1	4	0	13	1	0	1	0	2	0	0	0	0	0	0
09:15	33	9	17	0	59	8	0	3	0	11	0	0	0	0	0	0	0	0	0	0	1
09:30	37	10	16	0	63	10	1	5	0	16	1	0	0	0	1	0	0	0	0	0	1
09:45	44	12	19	0	75	10	0	5	0	15	0	0	1	0	1	0	0	0	0	0	1
SUBTOTAL	401	77	158	0	636	91	5	43	0	139	10	0	5	0	15	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Sprucewood Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	64	31	18	0	113	18	5	6	0	29	0	0	0	0	0	0	0	0	0	0	2
12:15	56	19	24	0	99	6	4	3	0	13	0	0	0	0	0	0	0	0	0	0	3
12:30	45	18	25	0	88	5	3	1	0	9	1	1	0	0	2	0	0	0	0	0	2
12:45	44	20	23	0	87	7	2	3	0	12	1	0	0	0	1	0	0	0	0	0	1
13:00	40	22	22	0	84	7	1	2	0	10	0	0	0	0	0	0	0	0	0	0	1
13:15	44	20	20	0	84	6	4	5	0	15	0	0	0	0	0	0	0	0	0	0	1
13:30	52	9	22	0	83	8	1	4	0	13	1	0	1	0	2	0	0	0	0	0	5
13:45	49	24	26	0	99	7	3	4	0	14	4	0	0	0	4	0	0	0	0	0	0
SUBTOTAL	394	163	180	0	737	64	23	28	0	115	7	1	1	0	9	0	0	0	0	0	15

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Sprucewood Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	67	21	30	0	118	16	5	5	0	26	1	0	0	0	1	0	0	0	0	0	1
16:15	50	17	20	0	87	10	2	14	0	26	0	0	0	0	0	0	0	0	0	0	1
16:30	70	16	28	0	114	12	5	8	0	25	1	0	0	0	1	0	0	0	0	0	0
16:45	46	15	27	0	88	8	5	6	0	19	0	0	0	0	0	0	0	0	0	0	1
17:00	38	17	37	0	92	10	3	3	0	16	1	0	0	0	1	0	0	0	0	0	1
17:15	42	16	27	0	85	10	2	7	0	19	0	0	0	0	0	0	0	0	0	0	0
17:30	54	13	28	0	95	4	2	9	0	15	1	0	0	0	1	0	0	0	0	0	0
17:45	43	10	39	0	92	8	1	7	0	16	0	0	0	0	0	0	0	0	0	0	0
18:00	56	13	33	0	102	8	2	4	0	14	2	0	0	0	2	0	0	0	0	0	0
18:15	52	16	28	0	96	4	2	4	0	10	0	0	0	0	0	0	0	0	0	0	0
18:30	49	12	33	0	94	10	4	6	0	20	1	0	0	0	1	0	0	0	0	0	2
18:45	44	11	29	0	84	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	611	177	359	0	1147	103	33	80	0	216	7	0	0	0	7	0	0	0	0	0	7
GRAND TOTAL	1406	417	697	0	2520	258	61	151	0	470	24	1	6	0	31	0	0	0	0	0	31

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	09:00:00
To:	10:00:00	To:	10:00:00

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Site ID: 1925700004
Count Date: Aug 01, 2019
Weather conditions:

**** Signalized Intersection **** **Major Road:** Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	342	537	879
MT	73	96	169
HT	7	3	10
Bicycles	0	0	0
	422	**636**	**1058**

Malden Rd

Bicycles	0	0	0	0
HT	3	4	0	0
MT	24	47	2	0
Cars	96	228	18	0
Totals	**123**	**279**	**20**	**0**

East Approach

	Out	In	Total
Cars	94	134	228
MT	15	15	30
HT	0	1	1
Bicycles	0	0	0
	109	**150**	**259**

Sprucewood Ave

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	2	36	164	**202**
0	0	2	38	**40**
0	2	17	66	**85**

Peds: 4
Peds: 3
Peds: 7
Peds: 2

Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
20	18	2	0	0
25	23	2	0	0
64	53	11	0	0

West Approach

	Out	In	Total
Cars	268	202	470
MT	55	41	96
HT	4	4	8
Bicycles	0	0	0
	327	**247**	**574**

Malden Rd

Totals	**99**	**414**	**90**	**0**
Cars	83	355	78	0
MT	15	58	11	0
HT	1	1	1	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	516	347	863
MT	84	75	159
HT	3	6	9
Bicycles	0	0	0
	603	**428**	**1031**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Count Date: Aug 01, 2019
Period: 07:00 - 10:00

Peak Hour Data (09:00 - 10:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Sprucewood Ave						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
09:00	3	63	33	0	0	99	26	100	7	0	0	133	13	4	6	0	2	23	59	8	19	0	0	86	341
09:15	4	73	35	0	2	112	28	97	26	0	0	151	15	6	2	0	2	23	41	9	20	0	1	70	356
09:30	6	63	31	0	0	100	22	116	31	0	0	169	15	5	3	0	1	23	48	11	21	0	1	80	372
09:45	7	80	24	0	2	111	23	101	26	0	2	150	21	10	9	0	2	40	54	12	25	0	1	91	392
Grand Total	**20**	**279**	**123**	**0**	**4**	**422**	**99**	**414**	**90**	**0**	**2**	**603**	**64**	**25**	**20**	**0**	**7**	**109**	**202**	**40**	**85**	**0**	**3**	**327**	**1461**
Approach %	4.7	66.1	29.1	0		-	16.4	68.7	14.9	0		-	58.7	22.9	18.3	0		-	61.8	12.2	26	0		-	
Totals %	1.4	19.1	8.4	0		28.9	6.8	28.3	6.2	0		41.3	4.4	1.7	1.4	0		7.5	13.8	2.7	5.8	0		22.4	
PHF	**0.71**	**0.87**	**0.88**	**0**		**0.94**	**0.88**	**0.89**	**0.73**	**0**		**0.89**	**0.76**	**0.63**	**0.56**	**0**		**0.68**	**0.86**	**0.83**	**0.85**	**0**		**0.9**	**0.93**
Cars	18	228	96	0		342	83	355	78	0		516	53	23	18	0		94	164	38	66	0		268	1220
% Cars	90	81.7	78	0		81	83.8	85.7	86.7	0		85.6	82.8	92	90	0		86.2	81.2	95	77.6	0		82	83.5
Medium Trucks	2	47	24	0		73	15	58	11	0		84	11	2	2	0		15	36	2	17	0		55	227
% Medium Trucks	10	16.8	19.5	0		17.3	15.2	14	12.2	0		13.9	17.2	8	10	0		13.8	17.8	5	20	0		16.8	15.5
Heavy Trucks	0	4	3	0		7	1	1	1	0		3	0	0	0	0		0	2	0	2	0		4	14
% Heavy Trucks	0	1.4	2.4	0		1.7	1	0.2	1.1	0		0.5	0	0	0	0		0	1	0	2.4	0		1.2	1
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					4	-					2	-					7	-					3	-	16
% Peds					25	-					12.5	-					43.8	-					18.8	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Site ID: 1925700004
Count Date: Aug 01, 2019
Weather conditions:

**** Signalized Intersection ****
Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	555	583	1138
MT	103	116	219
HT	5	4	9
Bicycles	0	0	0
	663	**703**	**1366**

Malden Rd

Bicycles	0	0	0	0
HT	3	1	1	0
MT	33	65	5	0
Cars	167	356	32	0
Totals	**203**	**422**	**38**	**0**

East Approach

	Out	In	Total
Cars	237	234	471
MT	43	34	77
HT	0	2	2
Bicycles	0	0	0
	280	**270**	**550**

Sprucewood Ave

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	2	36	209	**247**
0	1	14	88	**103**
0	0	13	90	**103**

Peds: 8
Peds: 2
Peds: 3
Peds: 15



Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
26	21	5	0	0
111	85	26	0	0
143	131	12	0	0

West Approach

	Out	In	Total
Cars	387	339	726
MT	63	76	139
HT	3	5	8
Bicycles	0	0	0
	453	**420**	**873**

Malden Rd

Totals	**106**	**430**	**129**	**0**
Cars	87	353	114	0
MT	17	75	15	0
HT	2	2	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	554	577	1131
MT	107	90	197
HT	4	1	5
Bicycles	0	0	0
	665	**668**	**1333**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Count Date: Aug 01, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Sprucewood Ave						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
12:00	7	116	47	0	0	170	35	98	36	0	5	169	35	27	9	0	0	71	82	36	24	0	2	142	552
12:15	11	106	49	0	1	166	26	127	29	0	5	182	33	30	4	0	0	67	62	23	27	0	3	112	527
12:30	6	100	54	0	1	160	21	101	41	0	4	163	39	24	5	0	2	68	51	22	26	0	2	99	490
12:45	14	100	53	0	0	167	24	104	23	0	1	151	36	30	8	0	1	74	52	22	26	0	1	100	492
Grand Total	**38**	**422**	**203**	**0**	**2**	**663**	**106**	**430**	**129**	**0**	**15**	**665**	**143**	**111**	**26**	**0**	**3**	**280**	**247**	**103**	**103**	**0**	**8**	**453**	**2061**
Approach %	5.7	63.7	30.6	0		-	15.9	64.7	19.4	0		-	51.1	39.6	9.3	0		-	54.5	22.7	22.7	0		-	
Totals %	1.8	20.5	9.8	0		32.2	5.1	20.9	6.3	0		32.3	6.9	5.4	1.3	0		13.6	12	5	5	0		22	
PHF	**0.68**	**0.91**	**0.94**	**0**		**0.98**	**0.76**	**0.85**	**0.79**	**0**		**0.91**	**0.92**	**0.93**	**0.72**	**0**		**0.95**	**0.75**	**0.72**	**0.95**	**0**		**0.8**	**0.93**
Cars	32	356	167	0		555	87	353	114	0		554	131	85	21	0		237	209	88	90	0		387	1733
% Cars	84.2	84.4	82.3	0		83.7	82.1	82.1	88.4	0		83.3	91.6	76.6	80.8	0		84.6	84.6	85.4	87.4	0		85.4	84.1
Medium Trucks	5	65	33	0		103	17	75	15	0		107	12	26	5	0		43	36	14	13	0		63	316
% Medium Trucks	13.2	15.4	16.3	0		15.5	16	17.4	11.6	0		16.1	8.4	23.4	19.2	0		15.4	14.6	13.6	12.6	0		13.9	15.3
Heavy Trucks	1	1	3	0		5	2	2	0	0		4	0	0	0	0		0	2	1	0	0		3	12
% Heavy Trucks	2.6	0.2	1.5	0		0.8	1.9	0.5	0	0		0.6	0	0	0	0		0	0.8	1	0	0		0.7	0.6
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					2	-					15	-					3	-					8	-	28
% Peds					7.1	-					53.6	-					10.7	-					28.6	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:30:00
To:	19:00:00	To:	17:30:00

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Site ID: 1925700004
Count Date: Aug 01, 2019
Weather conditions:

**** Signalized Intersection ****
Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	821	567	1388
MT	130	95	225
HT	4	5	9
Bicycles	0	0	0
	955	**667**	**1622**

Malden Rd

Bicycles	0	0	0	0
HT	2	2	0	0
MT	34	95	1	0
Cars	241	549	31	0
Totals	**277**	**646**	**32**	**0**

East Approach

	Out	In	Total
Cars	275	177	452
MT	38	30	68
HT	0	0	0
Bicycles	0	0	0
	313	**207**	**520**

Sprucewood Ave

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	2	40	196	**238**
0	0	15	64	**79**
0	0	24	119	**143**

Peds: 2 | Peds: 4 | Peds: 6

Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
31	28	3	0	0
104	95	9	0	0
178	152	26	0	0

West Approach

	Out	In	Total
Cars	379	434	813
MT	79	60	139
HT	2	3	5
Bicycles	0	0	0
	460	**497**	**957**

Malden Rd

Totals	**116**	**398**	**96**	**0**
Cars	98	343	82	0
MT	17	52	14	0
HT	1	3	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	523	820	1343
MT	83	145	228
HT	4	2	6
Bicycles	0	0	0
	610	**967**	**1577**

Cars - Cars | MT - Medium Trucks | HT - Heavy Trucks | Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Sprucewood Ave-Commercial Access
Count Date: Aug 01, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Sprucewood Ave						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:30	6	172	57	0	0	235	21	84	24	0	1	129	44	25	11	0	0	80	83	21	36	0	0	140	584
16:45	9	164	56	0	2	229	33	97	25	0	3	155	49	27	5	0	1	81	54	20	33	0	1	107	572
17:00	8	159	78	0	0	245	30	119	31	0	2	180	37	23	11	0	3	71	49	20	40	0	1	109	605
17:15	9	151	86	0	0	246	32	98	16	0	0	146	48	29	4	0	0	81	52	18	34	0	0	104	577
Grand Total	**32**	**646**	**277**	**0**	**2**	**955**	**116**	**398**	**96**	**0**	**6**	**610**	**178**	**104**	**31**	**0**	**4**	**313**	**238**	**79**	**143**	**0**	**2**	**460**	**2338**
Approach %	3.4	67.6	29	0		-	19	65.2	15.7	0		-	56.9	33.2	9.9	0		-	51.7	17.2	31.1	0		-	
Totals %	1.4	27.6	11.8	0		40.8	5	17	4.1	0		26.1	7.6	4.4	1.3	0		13.4	10.2	3.4	6.1	0		19.7	
PHF	**0.89**	**0.94**	**0.81**	**0**		**0.97**	**0.88**	**0.84**	**0.77**	**0**		**0.85**	**0.91**	**0.9**	**0.7**	**0**		**0.97**	**0.72**	**0.94**	**0.89**	**0**		**0.82**	**0.97**
Cars	31	549	241	0		821	98	343	82	0		523	152	95	28	0		275	196	64	119	0		379	1998
% Cars	96.9	85	87	0		86	84.5	86.2	85.4	0		85.7	85.4	91.3	90.3	0		87.9	82.4	81	83.2	0		82.4	85.5
Medium Trucks	1	95	34	0		130	17	52	14	0		83	26	9	3	0		38	40	15	24	0		79	330
% Medium Trucks	3.1	14.7	12.3	0		13.6	14.7	13.1	14.6	0		13.6	14.6	8.7	9.7	0		12.1	16.8	19	16.8	0		17.2	14.1
Heavy Trucks	0	2	2	0		4	1	3	0	0		4	0	0	0	0		0	2	0	0	0		2	10
% Heavy Trucks	0	0.3	0.7	0		0.4	0.9	0.8	0	0		0.7	0	0	0	0		0	0.8	0	0	0		0.4	0.4
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					2	-					6	-					4	-					2	-	14
% Peds					14.3	-					42.9	-					28.6	-					14.3	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

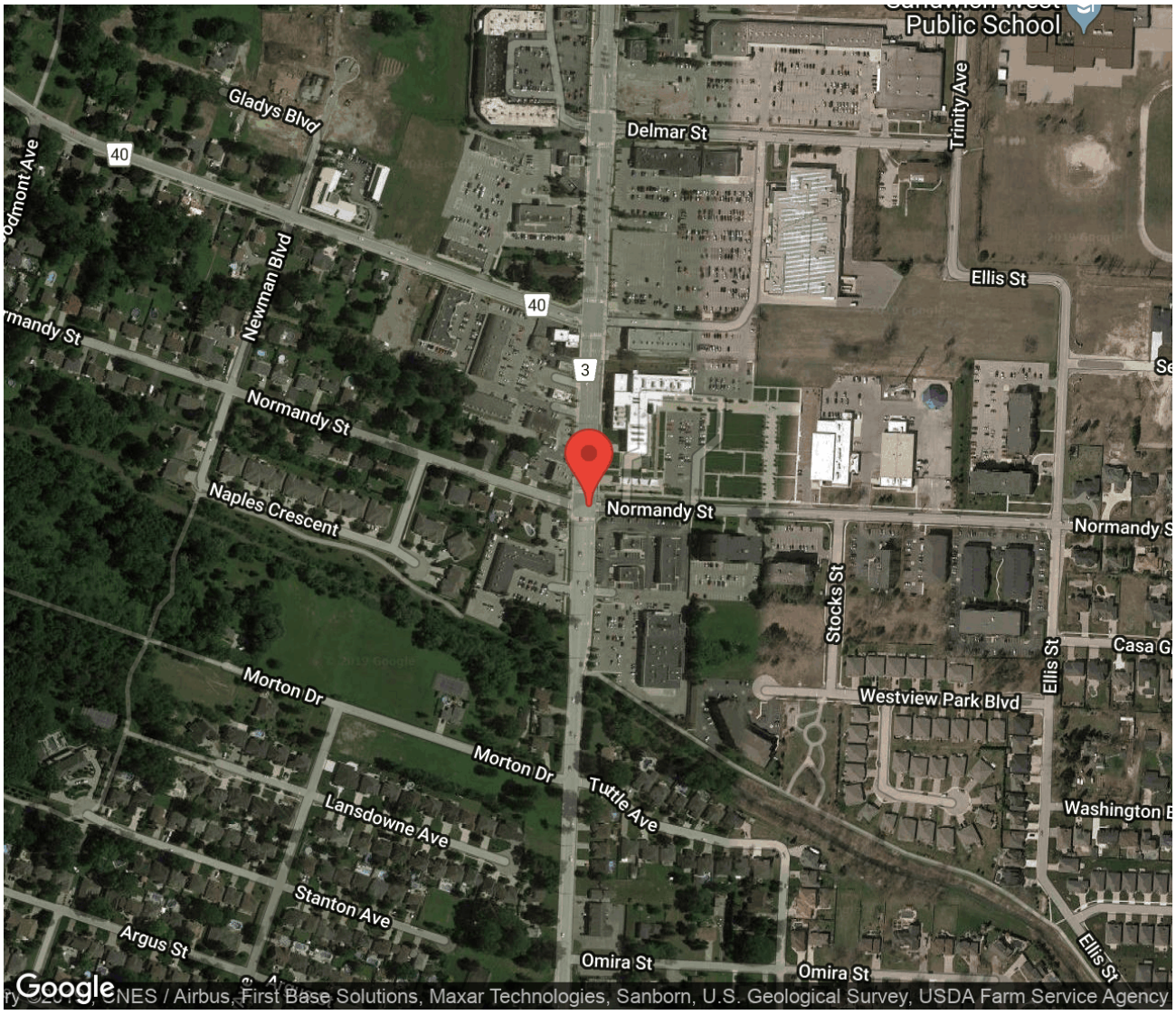
Intersection Count Report

Intersection:	Malden Rd & Normandy St
Municipality:	LaSalle
Count Date:	Aug 01, 2019
Site Code:	1925700005
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	73	146	6	0	225	0	6	453	66	0	525	2
08:00 - 09:00	60	272	5	0	337	2	9	584	65	0	658	2
09:00 - 10:00	112	311	10	0	433	4	8	493	79	0	580	0
BREAK												
12:00 - 13:00	144	517	18	0	679	1	11	523	78	0	612	5
13:00 - 14:00	141	499	14	0	654	1	16	503	83	0	602	2
BREAK												
16:00 - 17:00	135	813	23	0	971	5	21	462	76	0	559	1
17:00 - 18:00	153	793	16	0	962	2	16	504	94	0	614	1
18:00 - 19:00	150	628	20	0	798	0	16	468	93	0	577	1
GRAND TOTAL	**968**	**3979**	**112**	**0**	**5059**	**15**	**103**	**3990**	**634**	**0**	**4727**	**14**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

Normandy St - Traffic Summary

Hour	East Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)						West Approach Totals (Includes Cars, Medium Trucks, Heavy Trucks, Bicycles)					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	29	14	74	0	117	0	5	12	3	0	20	0
08:00 - 09:00	66	7	73	0	146	3	7	9	8	0	24	1
09:00 - 10:00	78	12	108	0	198	6	13	17	7	0	37	3
BREAK												
12:00 - 13:00	109	11	146	0	266	5	14	15	14	0	43	4
13:00 - 14:00	106	15	131	0	252	2	11	11	14	0	36	5
BREAK												
16:00 - 17:00	184	17	129	0	330	3	17	26	13	0	56	5
17:00 - 18:00	206	18	123	0	347	2	19	15	21	0	55	1
18:00 - 19:00	132	18	95	0	245	4	11	17	11	0	39	3
GRAND TOTAL	**910**	**112**	**879**	**0**	**1901**	**25**	**97**	**122**	**91**	**0**	**310**	**22**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
07:00	16	29	0	0	45	2	2	0	0	4	1	0	0	0	1	0	0	0	0	0	0
07:15	15	41	2	0	58	5	10	0	0	15	0	1	0	0	1	0	0	0	0	0	0
07:30	3	19	1	0	23	1	10	0	0	11	1	1	0	0	2	0	0	0	0	0	0
07:45	21	22	3	0	46	8	10	0	0	18	0	1	0	0	1	0	0	0	0	0	0
08:00	9	47	0	0	56	0	12	0	0	12	0	2	0	0	2	0	0	0	0	0	0
08:15	13	43	1	0	57	2	19	0	0	21	0	1	0	0	1	0	0	0	0	0	0
08:30	9	60	0	0	69	3	5	1	0	9	0	0	0	0	0	0	0	0	0	0	2
08:45	20	68	3	0	91	4	13	0	0	17	0	2	0	0	2	0	0	0	0	0	0
09:00	19	59	1	0	79	5	10	0	0	15	1	1	0	0	2	0	0	0	0	0	0
09:15	22	59	2	0	83	4	15	0	0	19	0	1	0	0	1	0	0	0	0	0	3
09:30	24	53	3	0	80	7	15	0	0	22	0	2	0	0	2	0	0	0	0	0	1
09:45	24	77	4	0	105	6	18	0	0	24	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	195	577	20	0	792	47	139	1	0	187	3	13	0	0	16	0	0	0	0	0	6

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	34	117	3	0	154	10	16	1	0	27	0	0	0	0	0	0	0	0	0	0	0
12:15	26	114	4	0	144	5	20	0	0	25	0	0	0	0	0	0	0	0	0	0	0
12:30	33	109	3	0	145	3	19	2	0	24	0	1	0	0	1	0	0	0	0	0	1
12:45	27	106	4	0	137	6	15	1	0	22	0	0	0	0	0	0	0	0	0	0	0
13:00	28	116	3	0	147	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
13:15	30	99	3	0	132	4	12	0	0	16	0	2	0	0	2	0	0	0	0	0	0
13:30	35	106	3	0	144	4	18	0	0	22	0	2	0	0	2	0	0	0	0	0	1
13:45	35	102	5	0	142	5	26	0	0	31	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	248	869	28	0	1145	37	142	4	0	183	0	5	0	0	5	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	30	160	3	0	193	6	26	0	0	32	0	0	0	0	0	0	0	0	0	0	3
16:15	26	168	4	0	198	7	23	0	0	30	0	1	0	0	1	0	0	0	0	0	0
16:30	26	188	3	0	217	6	45	4	0	55	0	0	0	0	0	0	0	0	0	0	0
16:45	31	170	8	0	209	3	32	1	0	36	0	0	0	0	0	0	0	0	0	0	2
17:00	36	168	5	0	209	2	25	0	0	27	0	1	0	0	1	0	0	0	0	0	0
17:15	34	171	3	0	208	5	28	0	0	33	0	0	0	0	0	0	0	0	0	0	1
17:30	27	170	2	0	199	7	27	1	0	35	1	0	0	0	1	0	0	0	0	0	1
17:45	35	170	5	0	210	6	32	0	0	38	0	1	0	0	1	0	0	0	0	0	0
18:00	40	143	2	0	185	2	27	1	0	30	0	0	0	0	0	0	0	0	0	0	0
18:15	35	153	3	0	191	6	22	1	0	29	0	0	0	0	0	0	0	0	0	0	0
18:30	32	119	5	0	156	4	25	1	0	30	0	1	0	0	1	0	0	0	0	0	0
18:45	28	120	5	0	153	3	18	2	0	23	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	380	1900	48	0	2328	57	330	11	0	398	1	4	0	0	5	0	0	0	0	0	7
GRAND TOTAL	823	3346	96	0	4265	141	611	16	0	768	4	22	0	0	26	0	0	0	0	0	15

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
07:00	0	68	11	0	79	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
07:15	1	72	9	0	82	1	16	3	0	20	0	1	0	0	1	0	0	0	0	0	2
07:30	1	111	15	0	127	0	17	8	0	25	0	1	0	0	1	0	0	0	0	0	0
07:45	3	132	17	0	152	0	24	3	0	27	0	0	0	0	0	0	0	0	0	0	0
08:00	1	116	13	0	130	0	18	1	0	19	0	1	0	0	1	0	0	0	0	0	0
08:15	4	115	17	0	136	1	24	2	0	27	0	0	0	0	0	0	0	0	0	0	0
08:30	1	121	13	0	135	0	21	2	0	23	0	1	0	0	1	0	0	0	0	0	1
08:45	2	144	13	0	159	0	22	4	0	26	0	1	0	0	1	0	0	0	0	0	1
09:00	1	92	17	0	110	1	17	2	0	20	0	0	0	0	0	0	0	0	0	0	0
09:15	1	95	18	0	114	0	19	1	0	20	0	0	1	0	1	0	0	0	0	0	0
09:30	1	114	14	0	129	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
09:45	3	111	25	0	139	1	24	1	0	26	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	19	1291	182	0	1492	4	232	27	0	263	0	7	1	0	8	0	0	0	0	0	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	3	119	21	0	143	1	21	1	0	23	0	3	0	0	3	0	0	0	0	0	2
12:15	4	112	12	0	128	0	18	2	0	20	0	0	0	0	0	0	0	0	0	0	0
12:30	1	107	17	0	125	0	15	2	0	17	0	1	0	0	1	0	0	0	0	0	0
12:45	1	103	19	0	123	1	24	4	0	29	0	0	0	0	0	0	0	0	0	0	3
13:00	2	117	10	0	129	0	13	1	0	14	0	2	0	0	2	0	0	0	0	0	0
13:15	5	103	26	0	134	0	23	3	0	26	0	2	0	0	2	0	0	0	0	0	0
13:30	1	107	18	0	126	2	15	1	0	18	0	0	0	0	0	0	0	0	0	0	0
13:45	6	105	20	0	131	0	16	4	0	20	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	23	873	143	0	1039	4	145	18	0	167	0	8	0	0	8	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	2	100	15	0	117	0	17	5	0	22	0	1	0	0	1	0	0	0	0	0	0
16:15	6	105	16	0	127	1	16	0	0	17	0	1	0	0	1	0	0	0	0	0	1
16:30	2	95	20	0	117	1	16	2	0	19	0	1	0	0	1	0	0	0	0	0	0
16:45	7	94	17	0	118	2	15	1	0	18	0	1	0	0	1	0	0	0	0	0	0
17:00	1	123	15	0	139	2	24	3	0	29	0	1	0	0	1	0	0	0	0	0	1
17:15	4	104	23	0	131	0	12	6	0	18	0	1	0	0	1	0	0	0	0	0	0
17:30	2	93	24	0	119	1	15	1	0	17	0	1	0	0	1	0	0	0	0	0	0
17:45	6	109	16	0	131	0	20	6	0	26	0	1	0	0	1	0	0	0	0	0	0
18:00	6	105	27	0	138	0	17	11	0	28	0	0	0	0	0	0	0	0	0	0	0
18:15	5	106	21	0	132	1	17	3	0	21	0	0	0	0	0	0	0	0	0	0	0
18:30	0	90	18	0	108	1	17	2	0	20	0	1	0	0	1	0	0	0	0	0	1
18:45	1	103	10	0	114	2	12	1	0	15	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	42	1227	222	0	1491	11	198	41	0	250	0	9	0	0	9	0	0	0	0	0	3
GRAND TOTAL	84	3391	547	0	4022	19	575	86	0	680	0	24	1	0	25	0	0	0	0	0	14

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	6	2	10	0	18	2	1	4	0	7	0	0	0	0	0	0	0	0	0	0	0
07:15	3	1	13	0	17	1	1	4	0	6	0	0	0	0	0	0	0	0	0	0	0
07:30	5	2	14	0	21	0	3	0	0	3	1	1	0	0	2	0	0	0	0	0	0
07:45	10	1	23	0	34	1	2	6	0	9	0	0	0	0	0	0	0	0	0	0	0
08:00	18	1	16	0	35	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	0
08:15	13	2	13	0	28	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	1
08:30	18	0	17	0	35	1	1	2	0	4	1	0	1	0	2	0	0	0	0	0	2
08:45	10	3	16	0	29	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
09:00	16	3	18	0	37	2	1	3	0	6	0	0	0	0	0	0	0	0	0	0	1
09:15	14	2	27	0	43	4	0	3	0	7	0	0	0	0	0	0	0	0	0	0	2
09:30	15	2	32	0	49	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
09:45	16	4	20	0	40	7	0	5	0	12	1	0	0	0	1	0	0	0	0	0	2
SUBTOTAL	144	23	219	0	386	26	9	35	0	70	3	1	1	0	5	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	21	1	26	0	48	3	0	7	0	10	0	0	0	0	0	0	0	0	0	0	0
12:15	20	3	34	0	57	4	1	10	0	15	0	0	0	0	0	0	0	0	0	0	0
12:30	25	2	35	0	62	4	0	5	0	9	0	0	0	0	0	0	0	0	0	0	2
12:45	29	4	21	0	54	3	0	8	0	11	0	0	0	0	0	0	0	0	0	0	3
13:00	20	5	33	0	58	2	1	3	0	6	0	0	0	0	0	0	0	0	0	0	0
13:15	19	0	32	0	51	4	0	2	0	6	0	1	0	0	1	0	0	0	0	0	0
13:30	26	4	19	0	49	3	0	8	0	11	0	0	0	0	0	0	0	0	0	0	1
13:45	25	3	30	0	58	7	1	4	0	12	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	185	22	230	0	437	30	3	47	0	80	0	1	0	0	1	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

East Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	31	3	30	0	64	8	1	7	0	16	0	0	0	0	0	0	0	0	0	0	2
16:15	39	2	24	0	65	8	1	2	0	11	0	0	1	0	1	0	0	0	0	0	0
16:30	48	6	23	0	77	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	1
16:45	45	4	32	0	81	2	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0
17:00	37	2	29	0	68	10	0	5	0	15	0	0	0	0	0	0	0	0	0	0	0
17:15	37	5	25	0	67	5	0	5	0	10	0	0	0	0	0	0	0	0	0	0	0
17:30	50	5	19	0	74	9	1	2	0	12	1	0	0	0	1	0	0	0	0	0	2
17:45	50	5	33	0	88	7	0	5	0	12	0	0	0	0	0	0	0	0	0	0	0
18:00	30	7	26	0	63	6	1	3	0	10	0	0	0	0	0	0	0	0	0	0	1
18:15	33	5	20	0	58	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	1
18:30	36	2	17	0	55	6	0	3	0	9	0	0	0	0	0	0	0	0	0	0	1
18:45	15	3	20	0	38	4	0	3	0	7	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	451	49	298	0	798	70	4	48	0	122	1	0	1	0	2	0	0	0	0	0	9
GRAND TOTAL	780	94	747	0	1621	126	16	130	0	272	4	2	2	0	8	0	0	0	0	0	25

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
07:15	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	4	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	2	3	0	0	5	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
08:00	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:15	3	1	3	0	7	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
08:30	2	1	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	1	2	2	0	5	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1
09:00	1	7	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:15	4	1	3	0	8	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
09:30	3	3	3	0	9	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
09:45	4	5	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	22	31	13	0	66	3	7	5	0	15	0	0	0	0	0	0	0	0	0	0	4

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	5	6	2	0	13	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
12:15	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30	3	3	4	0	10	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:45	1	4	1	0	6	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1
13:00	4	2	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13:15	3	3	1	0	7	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30	0	2	5	0	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
13:45	4	3	2	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	24	23	23	0	70	1	2	5	0	8	0	1	0	0	1	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Normandy St
Municipality: LaSalle
Count Date: Aug 01, 2019

West Approach - Normandy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	4	1	2	0	7	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
16:15	4	4	2	0	10	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1
16:30	2	9	4	0	15	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
16:45	5	7	4	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:00	3	4	4	0	11	1	2	2	0	5	0	0	0	0	0	0	0	0	0	0	1
17:15	5	1	4	0	10	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
17:30	5	6	3	0	14	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:45	3	1	8	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	3	5	0	8	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
18:15	3	5	2	0	10	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
18:30	4	4	3	0	11	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2
18:45	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	39	47	41	0	127	8	11	4	0	23	0	0	0	0	0	0	0	0	0	0	9
GRAND TOTAL	**85**	**101**	**77**	**0**	**263**	**12**	**20**	**14**	**0**	**46**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**22**

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	09:00:00
To:	10:00:00	To:	10:00:00

Intersection: Malden Rd & Normandy St
Site ID: 1925700005
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	347	521	868
MT	80	91	171
HT	6	2	8
Bicycles	0	0	0
	433	**614**	**1047**

Malden Rd

Bicycles	0	0	0	0
HT	0	5	1	0
MT	0	58	22	0
Cars	10	248	89	0
Totals	**10**	**311**	**112**	**0**

East Approach

	Out	In	Total
Cars	169	179	348
MT	28	27	55
HT	1	2	3
Bicycles	0	0	0
	198	**208**	**406**

Normandy St

Bicycles	HT	MT	Cars	Totals	
0	0	0	0	**0**	
0	0	1	12	**13**	
0	0	1	16	**17**	
0	0	1	6	**7**	

Peds: 3

Peds: 4

Peds: 6

Peds: 0

Normandy St

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	108	97	11	0	0
	12	11	1	0	0
	78	61	16	1	0

West Approach

	Out	In	Total
Cars	34	27	61
MT	3	3	6
HT	0	0	0
Bicycles	0	0	0
	37	**30**	**67**

Totals	**8**	**493**	**79**	**0**
Cars	6	412	74	0
MT	2	79	4	0
HT	0	2	1	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	492	315	807
MT	85	75	160
HT	3	6	9
Bicycles	0	0	0
	580	**396**	**976**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Normandy St
Count Date: Aug 01, 2019
Period: 07:00 - 10:00

Peak Hour Data (09:00 - 10:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Normandy St						West Approach Normandy St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
09:00	25	70	1	0	0	96	2	109	19	0	0	130	18	4	21	0	1	43	1	7	0	0	1	8	277
09:15	26	75	2	0	3	103	1	114	20	0	0	135	18	2	30	0	2	50	4	2	3	0	1	9	297
09:30	31	70	3	0	1	104	1	134	14	0	0	149	18	2	32	0	1	52	4	3	4	0	0	11	316
09:45	30	96	4	0	0	130	4	136	26	0	0	166	24	4	25	0	2	53	4	5	0	0	1	9	358
Grand Total	**112**	**311**	**10**	**0**	**4**	**433**	**8**	**493**	**79**	**0**	**0**	**580**	**78**	**12**	**108**	**0**	**6**	**198**	**13**	**17**	**7**	**0**	**3**	**37**	**1248**
Approach %	25.9	71.8	2.3	0		-	1.4	85	13.6	0		-	39.4	6.1	54.5	0		-	35.1	45.9	18.9	0		-	
Totals %	9	24.9	0.8	0		34.7	0.6	39.5	6.3	0		46.5	6.3	1	8.7	0		15.9	1	1.4	0.6	0		3	
PHF	**0.9**	**0.81**	**0.63**	**0**		**0.83**	**0.5**	**0.91**	**0.76**	**0**		**0.87**	**0.81**	**0.75**	**0.84**	**0**		**0.93**	**0.81**	**0.61**	**0.44**	**0**		**0.84**	**0.87**
Cars	89	248	10	0		347	6	412	74	0		492	61	11	97	0		169	12	16	6	0		34	1042
% Cars	79.5	79.7	100	0		80.1	75	83.6	93.7	0		84.8	78.2	91.7	89.8	0		85.4	92.3	94.1	85.7	0		91.9	83.5
Medium Trucks	22	58	0	0		80	2	79	4	0		85	16	1	11	0		28	1	1	1	0		3	196
% Medium Trucks	19.6	18.6	0	0		18.5	25	16	5.1	0		14.7	20.5	8.3	10.2	0		14.1	7.7	5.9	14.3	0		8.1	15.7
Heavy Trucks	1	5	0	0		6	0	2	1	0		3	1	0	0	0		1	0	0	0	0		0	10
% Heavy Trucks	0.9	1.6	0	0		1.4	0	0.4	1.3	0		0.5	1.3	0	0	0		0.5	0	0	0	0		0	0.8
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					4	-					0	-					6	-					3	-	13
% Peds					30.8	-					0	-					46.2	-					23.1	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Normandy St
Site ID: 1925700005
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	580	570	1150
MT	98	109	207
HT	1	4	5
Bicycles	0	0	0
	679	**683**	**1362**

Malden Rd

Bicycles	0	0	0	0
HT	0	1	0	0
MT	4	70	24	0
Cars	14	446	120	0
Totals	**18**	**517**	**144**	**0**

East Approach

	Out	In	Total
Cars	221	202	423
MT	45	34	79
HT	0	1	1
Bicycles	0	0	0
	266	**237**	**503**

Normandy St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	1	13	**14**
0	1	1	13	**15**
0	0	3	11	**14**

Peds: 1

Peds: 4



Peds: 5

Peds: 5

Normandy St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
146	116	30	0	0
11	10	1	0	0
109	95	14	0	0

West Approach

	Out	In	Total
Cars	37	33	70
MT	5	7	12
HT	1	0	1
Bicycles	0	0	0
	43	**40**	**83**

Malden Rd

Totals	**11**	**523**	**78**	**0**
Cars	9	441	69	0
MT	2	78	9	0
HT	0	4	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	519	552	1071
MT	89	87	176
HT	4	1	5
Bicycles	0	0	0
	612	**640**	**1252**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Normandy St
Count Date: Aug 01, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Normandy St						West Approach Normandy St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	44	133	4	0	0	181	4	143	22	0	2	169	24	1	33	0	0	58	5	8	2	0	0	15	423
12:15	31	134	4	0	0	169	4	130	14	0	0	148	24	4	44	0	0	72	4	0	4	0	2	8	397
12:30	36	129	5	0	1	170	1	123	19	0	0	143	29	2	40	0	2	71	4	3	4	0	1	11	395
12:45	33	121	5	0	0	159	2	127	23	0	3	152	32	4	29	0	3	65	1	4	4	0	1	9	385
Grand Total	**144**	**517**	**18**	**0**	**1**	**679**	**11**	**523**	**78**	**0**	**5**	**612**	**109**	**11**	**146**	**0**	**5**	**266**	**14**	**15**	**14**	**0**	**4**	**43**	**1600**
Approach %	21.2	76.1	2.7	0		-	1.8	85.5	12.7	0		-	41	4.1	54.9	0		-	32.6	34.9	32.6	0		-	
Totals %	9	32.3	1.1	0		42.4	0.7	32.7	4.9	0		38.3	6.8	0.7	9.1	0		16.6	0.9	0.9	0.9	0		2.7	
PHF	**0.82**	**0.96**	**0.9**	**0**		**0.94**	**0.69**	**0.91**	**0.85**	**0**		**0.91**	**0.85**	**0.69**	**0.83**	**0**		**0.92**	**0.7**	**0.47**	**0.88**	**0**		**0.72**	**0.95**
Cars	120	446	14	0		580	9	441	69	0		519	95	10	116	0		221	13	13	11	0		37	1357
% Cars	83.3	86.3	77.8	0		85.4	81.8	84.3	88.5	0		84.8	87.2	90.9	79.5	0		83.1	92.9	86.7	78.6	0		86	84.8
Medium Trucks	24	70	4	0		98	2	78	9	0		89	14	1	30	0		45	1	1	3	0		5	237
% Medium Trucks	16.7	13.5	22.2	0		14.4	18.2	14.9	11.5	0		14.5	12.8	9.1	20.5	0		16.9	7.1	6.7	21.4	0		11.6	14.8
Heavy Trucks	0	1	0	0		1	0	4	0	0		4	0	0	0	0		0	0	1	0	0		1	6
% Heavy Trucks	0	0.2	0	0		0.1	0	0.8	0	0		0.7	0	0	0	0		0	0	6.7	0	0		2.3	0.4
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					5	-					5	-					4	-	15
% Peds					6.7	-					33.3	-					33.3	-					26.7	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:30:00
To:	19:00:00	To:	17:30:00

Intersection: Malden Rd & Normandy St
Site ID: 1925700005
Count Date: Aug 01, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	843	540	1383
MT	151	90	241
HT	1	4	5
Bicycles	0	0	0
	995	**634**	**1629**

Malden Rd

Bicycles	0	0	0	0
HT	0	1	0	0
MT	5	130	16	0
Cars	19	697	127	0
Totals	**24**	**828**	**143**	**0**

East Approach

	Out	In	Total
Cars	293	223	516
MT	40	33	73
HT	0	0	0
Bicycles	0	0	0
	333	**256**	**589**

Normandy St

Bicycles	HT	MT	Cars	Totals	
0	0	0	0	**0**	
0	0	3	15	**18**	
0	0	5	21	**26**	
0	0	2	16	**18**	

Peds: 3

Peds: 1

Peds: 3

Peds: 1

Normandy St

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	129	109	20	0	0
	17	17	0	0	0
	187	167	20	0	0

West Approach

	Out	In	Total
Cars	52	50	102
MT	10	10	20
HT	0	0	0
Bicycles	0	0	0
	62	**60**	**122**

Malden Rd

Totals	**19**	**487**	**87**	**0**
Cars	14	416	75	0
MT	5	67	12	0
HT	0	4	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	505	880	1385
MT	84	152	236
HT	4	1	5
Bicycles	0	0	0
	593	**1033**	**1626**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Normandy St
Count Date: Aug 01, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Normandy St						West Approach Normandy St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:30	32	233	7	0	0	272	3	112	22	0	0	137	51	6	26	0	1	83	2	12	4	0	0	18	510
16:45	34	202	9	0	2	245	9	110	18	0	0	137	47	4	39	0	0	90	5	7	4	0	2	16	488
17:00	38	194	5	0	0	237	3	148	18	0	1	169	47	2	34	0	0	83	4	6	6	0	1	16	505
17:15	39	199	3	0	1	241	4	117	29	0	0	150	42	5	30	0	0	77	7	1	4	0	0	12	480
Grand Total	**143**	**828**	**24**	**0**	**3**	**995**	**19**	**487**	**87**	**0**	**1**	**593**	**187**	**17**	**129**	**0**	**1**	**333**	**18**	**26**	**18**	**0**	**3**	**62**	**1983**
Approach %	14.4	83.2	2.4	0		-	3.2	82.1	14.7	0		-	56.2	5.1	38.7	0		-	29	41.9	29	0		-	
Totals %	7.2	41.8	1.2	0		50.2	1	24.6	4.4	0		29.9	9.4	0.9	6.5	0		16.8	0.9	1.3	0.9	0		3.1	
PHF	**0.92**	**0.89**	**0.67**	**0**		**0.91**	**0.53**	**0.82**	**0.75**	**0**		**0.88**	**0.92**	**0.71**	**0.83**	**0**		**0.93**	**0.64**	**0.54**	**0.75**	**0**		**0.86**	**0.97**
Cars	127	697	19	0		843	14	416	75	0		505	167	17	109	0		293	15	21	16	0		52	1693
% Cars	88.8	84.2	79.2	0		84.7	73.7	85.4	86.2	0		85.2	89.3	100	84.5	0		88	83.3	80.8	88.9	0		83.9	85.4
Medium Trucks	16	130	5	0		151	5	67	12	0		84	20	0	20	0		40	3	5	2	0		10	285
% Medium Trucks	11.2	15.7	20.8	0		15.2	26.3	13.8	13.8	0		14.2	10.7	0	15.5	0		12	16.7	19.2	11.1	0		16.1	14.4
Heavy Trucks	0	1	0	0		1	0	4	0	0		4	0	0	0	0		0	0	0	0	0		0	5
% Heavy Trucks	0	0.1	0	0		0.1	0	0.8	0	0		0.7	0	0	0	0		0	0	0	0	0		0	0.3
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					3	-					1	-					1	-					3	-	8
% Peds					37.5	-					12.5	-					12.5	-					37.5	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

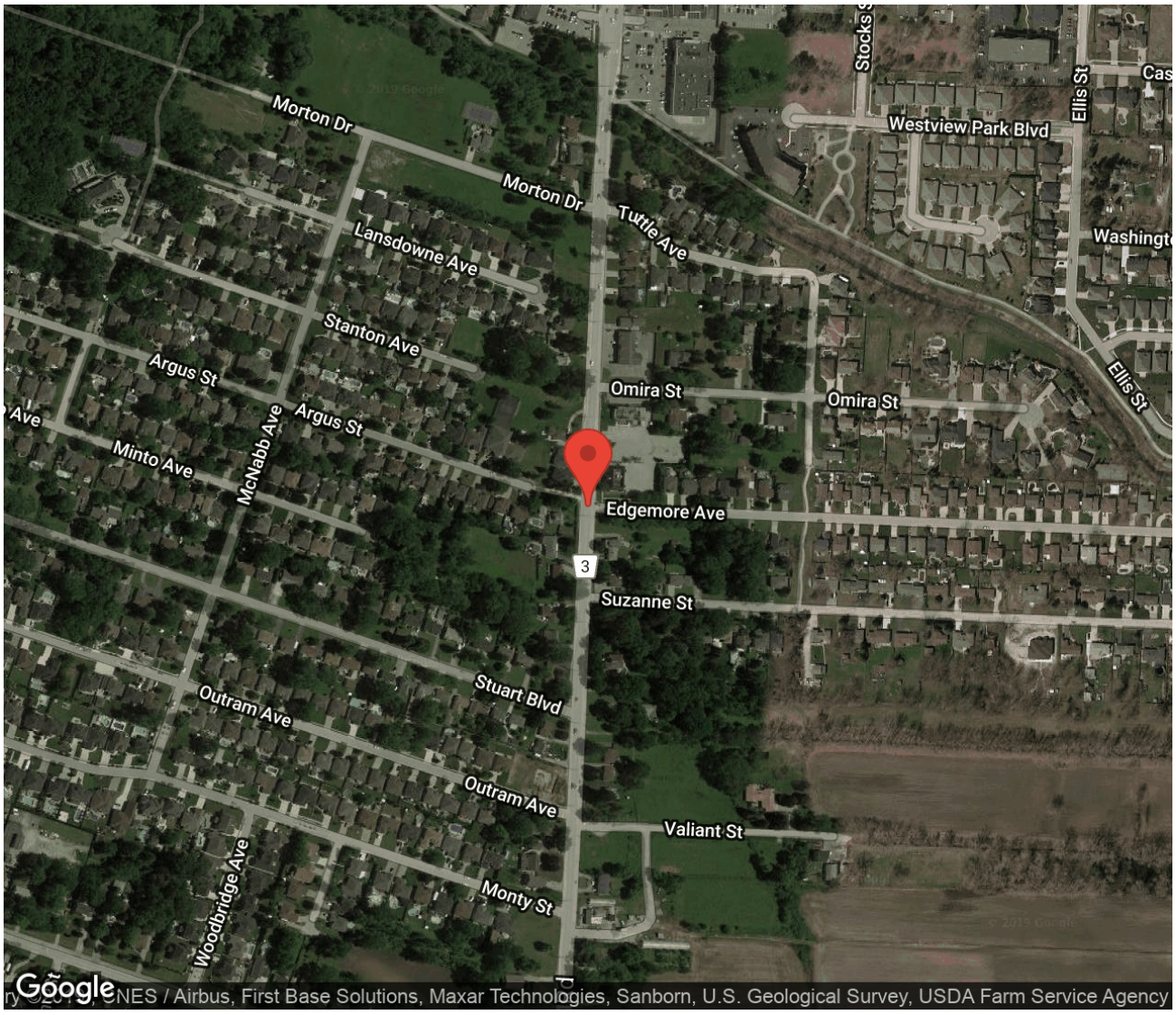
Intersection Count Report

Intersection:	Malden Rd & Edgemore Ave
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700006
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	1	169	0	0	170	0	0	467	6	0	473	0
08:00 - 09:00	9	316	0	0	325	2	0	598	4	0	602	0
09:00 - 10:00	9	343	0	0	352	3	0	534	6	0	540	1
BREAK												
12:00 - 13:00	16	585	0	0	601	1	0	540	5	0	545	0
13:00 - 14:00	9	560	0	0	569	0	0	525	4	0	529	0
BREAK												
16:00 - 17:00	16	891	0	0	907	0	0	523	8	0	531	0
17:00 - 18:00	24	912	0	0	936	0	0	560	13	0	573	0
18:00 - 19:00	12	705	0	0	717	1	0	508	9	0	517	0
GRAND TOTAL	**96**	**4481**	**0**	**0**	**4577**	**7**	**0**	**4255**	**55**	**0**	**4310**	**1**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

Edgemore Ave - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	4	0	11	0	15	2	0	0	0	0	0	0
08:00 - 09:00	6	0	15	0	21	4	0	0	0	0	0	0
09:00 - 10:00	2	0	14	0	16	10	0	0	0	0	0	0
BREAK												
12:00 - 13:00	5	0	17	0	22	3	0	0	0	0	0	0
13:00 - 14:00	4	0	10	0	14	2	0	0	0	0	0	0
BREAK												
16:00 - 17:00	4	0	10	0	14	2	0	0	0	0	0	0
17:00 - 18:00	12	0	16	0	28	5	0	0	0	0	0	0
18:00 - 19:00	10	0	18	0	28	0	0	0	0	0	0	0
GRAND TOTAL	**47**	**0**	**111**	**0**	**158**	**28**	**0**	**0**	**0**	**0**	**0**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	32	0	0	32	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	1	42	0	0	43	0	9	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:30	0	24	0	0	24	0	9	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:45	0	33	0	0	33	0	14	0	0	14	0	1	0	0	1	0	0	0	0	0	0
08:00	2	56	0	0	58	0	14	0	0	14	0	3	0	0	3	0	0	0	0	0	0
08:15	2	55	0	0	57	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
08:30	3	67	0	0	70	0	7	0	0	7	0	1	0	0	1	0	0	0	0	0	2
08:45	2	76	0	0	78	0	15	0	0	15	0	2	0	0	2	0	0	0	0	0	0
09:00	3	61	0	0	64	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
09:15	1	69	0	0	70	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	2
09:30	3	61	0	0	64	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
09:45	2	78	0	0	80	0	23	0	0	23	0	2	0	0	2	0	0	0	0	0	1
SUBTOTAL	19	654	0	0	673	0	159	0	0	159	0	15	0	0	15	0	0	0	0	0	5

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	3	131	0	0	134	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0
12:15	3	113	0	0	116	0	25	0	0	25	0	0	0	0	0	0	0	0	0	0	0
12:30	6	130	0	0	136	0	25	0	0	25	0	1	0	0	1	0	0	0	0	0	1
12:45	4	122	0	0	126	0	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0
13:00	5	127	0	0	132	1	18	0	0	19	0	0	0	0	0	0	0	0	0	0	0
13:15	1	102	0	0	103	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
13:30	2	136	0	0	138	0	20	0	0	20	0	2	0	0	2	0	0	0	0	0	0
13:45	0	107	0	0	107	0	30	0	0	30	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	24	968	0	0	992	1	172	0	0	173	0	5	0	0	5	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	8	164	0	0	172	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	0
16:15	3	177	0	0	180	0	28	0	0	28	0	1	0	0	1	0	0	0	0	0	0
16:30	1	208	0	0	209	0	44	0	0	44	0	0	0	0	0	0	0	0	0	0	0
16:45	4	204	0	0	208	0	34	0	0	34	0	0	0	0	0	0	0	0	0	0	0
17:00	2	177	0	0	179	0	34	0	0	34	0	1	0	0	1	0	0	0	0	0	0
17:15	7	201	0	0	208	1	28	0	0	29	0	0	0	0	0	0	0	0	0	0	0
17:30	8	202	0	0	210	0	32	0	0	32	0	1	0	0	1	0	0	0	0	0	0
17:45	3	199	0	0	202	3	36	0	0	39	0	1	0	0	1	0	0	0	0	0	0
18:00	3	160	0	0	163	0	30	0	0	30	0	0	0	0	0	0	0	0	0	0	0
18:15	3	171	0	0	174	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	1
18:30	0	145	0	0	145	0	33	0	0	33	0	1	0	0	1	0	0	0	0	0	0
18:45	6	121	0	0	127	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	48	2129	0	0	2177	4	374	0	0	378	0	5	0	0	5	0	0	0	0	0	1
GRAND TOTAL	91	3751	0	0	3842	5	705	0	0	710	0	25	0	0	25	0	0	0	0	0	7

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	65	0	0	65	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
07:15	0	79	0	0	79	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
07:30	0	114	3	0	117	0	29	0	0	29	0	0	0	0	0	0	0	0	0	0	0
07:45	0	128	3	0	131	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0
08:00	0	117	0	0	117	0	21	0	0	21	0	1	0	0	1	0	0	0	0	0	0
08:15	0	123	2	0	125	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0
08:30	0	127	2	0	129	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
08:45	0	141	0	0	141	0	27	0	0	27	0	1	0	0	1	0	0	0	0	0	0
09:00	0	84	2	0	86	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0
09:15	0	115	1	0	116	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
09:30	0	116	3	0	119	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
09:45	0	137	0	0	137	0	24	0	0	24	0	1	0	0	1	0	0	0	0	0	1
SUBTOTAL	0	1346	16	0	1362	0	246	0	0	246	0	7	0	0	7	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	0	121	1	0	122	0	23	0	0	23	0	1	0	0	1	0	0	0	0	0	0
12:15	0	94	0	0	94	0	24	0	0	24	0	0	0	0	0	0	0	0	0	0	0
12:30	0	121	0	0	121	0	17	3	0	20	0	1	0	0	1	0	0	0	0	0	0
12:45	0	113	1	0	114	0	25	0	0	25	0	0	0	0	0	0	0	0	0	0	0
13:00	0	122	0	0	122	0	13	1	0	14	0	2	0	0	2	0	0	0	0	0	0
13:15	0	105	2	0	107	0	20	0	0	20	0	2	0	0	2	0	0	0	0	0	0
13:30	0	117	1	0	118	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
13:45	0	111	0	0	111	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	904	5	0	909	0	155	4	0	159	0	6	0	0	6	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	0	96	2	0	98	0	21	0	0	21	0	1	0	0	1	0	0	0	0	0	0
16:15	0	116	3	0	119	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
16:30	0	102	1	0	103	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
16:45	0	127	1	0	128	0	23	1	0	24	0	1	0	0	1	0	0	0	0	0	0
17:00	0	118	2	0	120	0	21	2	0	23	0	1	0	0	1	0	0	0	0	0	0
17:15	0	125	3	0	128	0	22	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:30	0	108	1	0	109	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
17:45	0	124	4	0	128	0	19	1	0	20	0	1	0	0	1	0	0	0	0	0	0
18:00	0	121	3	0	124	0	32	0	0	32	0	0	0	0	0	0	0	0	0	0	0
18:15	0	111	1	0	112	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0
18:30	0	97	4	0	101	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
18:45	0	97	1	0	98	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1342	26	0	1368	0	240	4	0	244	0	9	0	0	9	0	0	0	0	0	0
GRAND TOTAL	0	3592	47	0	3639	0	641	8	0	649	0	22	0	0	22	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Edgemore Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
07:30	2	0	3	0	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30	2	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
09:15	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
09:30	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:45	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	11	0	36	0	47	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	16

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Edgemore Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:30	1	0	3	0	4	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1
12:45	0	0	4	0	4	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13:30	0	0	2	0	2	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	4	0	22	0	26	5	0	5	0	10	0	0	0	0	0	0	0	0	0	0	5

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Edgemore Ave
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Edgemore Ave

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	6	0	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
17:15	1	0	4	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
17:30	5	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	4	0	2	0	6	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1
18:00	1	0	4	0	5	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
18:15	3	0	2	0	5	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
18:30	2	0	6	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	1	0	3	0	4	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	21	0	39	0	60	5	0	5	0	10	0	0	0	0	0	0	0	0	0	0	7
GRAND TOTAL	36	0	97	0	133	11	0	14	0	25	0	0	0	0	0	0	0	0	0	0	28

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Edgemore Ave
Site ID: 1925700006
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	263	522	785
MT	55	88	143
HT	7	3	10
Bicycles	0	0	0
	325	**613**	**938**

Malden Rd

Bicycles	0	0	0
HT	7	0	0
MT	55	0	0
Cars	254	9	0
Totals	**316**	**9**	**0**

Peds: 2

Peds: 0

Peds: 4

Peds: 0

Totals	**598**	**4**	**0**
Cars	508	4	0
MT	87	0	0
HT	3	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	19	13	32
MT	2	0	2
HT	0	0	0
Bicycles	0	0	0
	21	**13**	**34**

Edgemore Ave

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
15	14	1	0	0
6	5	1	0	0

South Approach

	Out	In	Total
Cars	512	259	771
MT	87	56	143
HT	3	7	10
Bicycles	0	0	0
	602	**322**	**924**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Edgemore Ave
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Edgemore Ave						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	2	73		0	0	75		139	0	0	0	139	1		6	0	1	7					0		221
08:15	2	75		0	0	77		144	2	0	0	146	2		1	0	1	3					0		226
08:30	3	75		0	2	78		146	2	0	0	148	2		5	0	2	7					0		233
08:45	2	93		0	0	95		169	0	0	0	169	1		3	0	0	4					0		268
Grand Total	**9**	**316**		**0**	**2**	**325**		**598**	**4**	**0**	**0**	**602**	**6**		**15**	**0**	**4**	**21**					**0**	**0**	**948**
Approach %	2.8	97.2		0		-		99.3	0.7	0		-	28.6		71.4	0		-						-	
Totals %	0.9	33.3		0		34.3		63.1	0.4	0		63.5	0.6		1.6	0		2.2						0	
PHF	**0.75**	**0.85**		**0**		**0.86**		**0.88**	**0.5**	**0**		**0.89**	**0.75**		**0.63**	**0**		**0.75**						**0**	**0.88**
Cars	9	254		0		263		508	4	0		512	5		14	0		19						0	794
% Cars	100	80.4		0		80.9		84.9	100	0		85	83.3		93.3	0		90.5						0	83.8
Medium Trucks	0	55		0		55		87	0	0		87	1		1	0		2						0	144
% Medium Trucks	0	17.4		0		16.9		14.5	0	0		14.5	16.7		6.7	0		9.5						0	15.2
Heavy Trucks	0	7		0		7		3	0	0		3	0		0	0		0						0	10
% Heavy Trucks	0	2.2		0		2.2		0.5	0	0		0.5	0		0	0		0						0	1.1
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					2	-					0	-					4	-					0	-	6
% Peds					33.3	-					0	-					66.7	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Edgemore Ave
Site ID: 1925700006
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	512	462	974
MT	88	93	181
HT	1	2	3
Bicycles	0	0	0
	601	**557**	**1158**

Malden Rd

Bicycles	0	0	0
HT	1	0	0
MT	88	0	0
Cars	496	16	0
Totals	**585**	**16**	**0**

Peds: 1

Peds: 0

Peds: 3



Peds: 0

Totals	**540**	**5**	**0**
Cars	449	2	0
MT	89	3	0
HT	2	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	15	18	33
MT	7	3	10
HT	0	0	0
Bicycles	0	0	0
	22	**21**	**43**

Edgemore Ave

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	17	13	4	0	0
	5	2	3	0	0

South Approach

	Out	In	Total
Cars	451	498	949
MT	92	91	183
HT	2	1	3
Bicycles	0	0	0
	545	**590**	**1135**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Edgemore Ave
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Edgemore Ave						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	3	149		0	0	152		145	1	0	0	146	0		5	0	2	5					0		303
12:15	3	138		0	0	141		118	0	0	0	118	2		2	0	0	4					0		263
12:30	6	156		0	1	162		139	3	0	0	142	3		4	0	1	7					0		311
12:45	4	142		0	0	146		138	1	0	0	139	0		6	0	0	6					0		291
Grand Total	**16**	**585**		**0**	**1**	**601**		**540**	**5**	**0**	**0**	**545**	**5**		**17**	**0**	**3**	**22**					**0**	**0**	**1168**
Approach %	2.7	97.3		0		-		99.1	0.9	0		-	22.7		77.3	0		-						-	
Totals %	1.4	50.1		0		51.5		46.2	0.4	0		46.7	0.4		1.5	0		1.9						0	
PHF	**0.67**	**0.94**		**0**		**0.93**		**0.93**	**0.42**	**0**		**0.93**	**0.42**		**0.71**	**0**		**0.79**						**0**	**0.94**
Cars	16	496		0		512		449	2	0		451	2		13	0		15						0	978
% Cars	100	84.8		0		85.2		83.1	40	0		82.8	40		76.5	0		68.2						0	83.7
Medium Trucks	0	88		0		88		89	3	0		92	3		4	0		7						0	187
% Medium Trucks	0	15		0		14.6		16.5	60	0		16.9	60		23.5	0		31.8						0	16
Heavy Trucks	0	1		0		1		2	0	0		2	0		0	0		0						0	3
% Heavy Trucks	0	0.2		0		0.2		0.4	0	0		0.4	0		0	0		0						0	0.3
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					1	-					0	-					3	-					0	-	4
% Peds					25	-					0	-					75	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:45:00
To:	19:00:00	To:	17:45:00

Intersection: Malden Rd & Edgemore Ave
Site ID: 1925700006
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	805	493	1298
MT	129	86	215
HT	2	4	6
Bicycles	0	0	0
	936	**583**	**1519**

Malden Rd

Bicycles	0	0	0
HT	2	0	0
MT	128	1	0
Cars	784	21	0
Totals	**914**	**22**	**0**

Peds: 0

Peds: 0



Peds: 5

Peds: 0

Totals	**567**	**10**	**0**
Cars	478	7	0
MT	85	3	0
HT	4	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	22	28	50
MT	2	4	6
HT	0	0	0
Bicycles	0	0	0
	24	**32**	**56**

Edgemore Ave

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
16	15	1	0	0
8	7	1	0	0

South Approach

	Out	In	Total
Cars	485	791	1276
MT	88	129	217
HT	4	2	6
Bicycles	0	0	0
	577	**922**	**1499**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Edgemore Ave
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Edgemore Ave						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:45	4	238		0	0	242		151	2	0	0	153	1		3	0	1	4					0		399
17:00	2	212		0	0	214		140	4	0	0	144	0		7	0	0	7					0		365
17:15	8	229		0	0	237		148	3	0	0	151	2		4	0	4	6					0		394
17:30	8	235		0	0	243		128	1	0	0	129	5		2	0	0	7					0		379
Grand Total	**22**	**914**		**0**	**0**	**936**		**567**	**10**	**0**	**0**	**577**	**8**		**16**	**0**	**5**	**24**					**0**	**0**	**1537**
Approach %	2.4	97.6		0		-		98.3	1.7	0		-	33.3		66.7	0		-						-	
Totals %	1.4	59.5		0		60.9		36.9	0.7	0		37.5	0.5		1	0		1.6						0	
PHF	**0.69**	**0.96**		**0**		**0.96**		**0.94**	**0.63**	**0**		**0.94**	**0.4**		**0.57**	**0**		**0.86**						**0**	**0.96**
Cars	21	784		0		805		478	7	0		485	7		15	0		22						0	1312
% Cars	95.5	85.8		0		86		84.3	70	0		84.1	87.5		93.8	0		91.7						0	85.4
Medium Trucks	1	128		0		129		85	3	0		88	1		1	0		2						0	219
% Medium Trucks	4.5	14		0		13.8		15	30	0		15.3	12.5		6.3	0		8.3						0	14.2
Heavy Trucks	0	2		0		2		4	0	0		4	0		0	0		0						0	6
% Heavy Trucks	0	0.2		0		0.2		0.7	0	0		0.7	0		0	0		0						0	0.4
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					5	-					0	-	5
% Peds					0	-					0	-					100	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

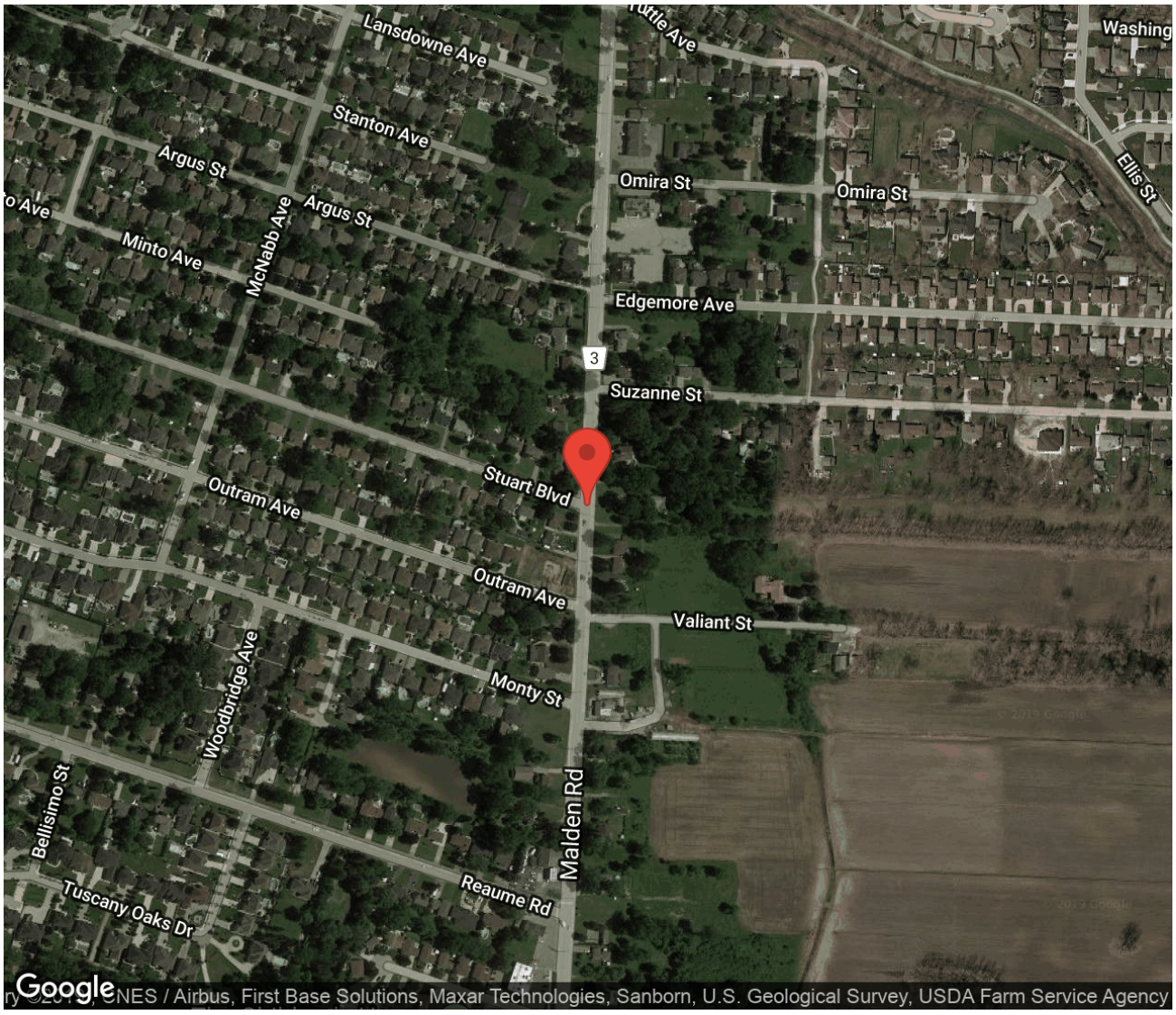
Intersection Count Report

Intersection:	Malden Rd & Stuart Blvd
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700007
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection:	Malden Rd & Stuart Blvd
Municipality:	LaSalle
Count Date:	Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	172	7	0	179	0	5	452	0	0	457	0
08:00 - 09:00	0	313	10	0	323	0	9	576	0	0	585	0
09:00 - 10:00	0	323	20	0	343	0	11	499	0	0	510	0
BREAK												
12:00 - 13:00	0	554	36	0	590	0	13	514	0	0	527	0
13:00 - 14:00	0	544	23	0	567	0	14	500	0	0	514	0
BREAK												
16:00 - 17:00	0	847	36	0	883	0	22	519	0	0	541	0
17:00 - 18:00	0	870	47	0	917	0	25	547	0	0	572	0
18:00 - 19:00	0	687	31	0	718	0	16	486	0	0	502	0
GRAND TOTAL	**0**	**4310**	**210**	**0**	**4520**	**0**	**115**	**4093**	**0**	**0**	**4208**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

Stuart Blvd - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	0	0	0	0	0	18	0	17	0	35	0
08:00 - 09:00	0	0	0	0	0	0	21	0	18	0	39	0
09:00 - 10:00	0	0	0	0	0	0	30	0	9	0	39	0
BREAK												
12:00 - 13:00	0	0	0	0	0	0	30	0	24	0	54	0
13:00 - 14:00	0	0	0	0	0	0	29	0	11	0	40	0
BREAK												
16:00 - 17:00	0	0	0	0	0	0	15	0	22	0	37	0
17:00 - 18:00	0	0	0	0	0	0	21	0	37	0	58	0
18:00 - 19:00	0	0	0	0	0	0	32	0	24	0	56	0
GRAND TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**196**	**0**	**162**	**0**	**358**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	30	0	0	30	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	0	44	2	0	46	0	8	1	0	9	0	1	0	0	1	0	0	0	0	0	0
07:30	0	26	1	0	27	0	9	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:45	0	35	2	0	37	0	14	1	0	15	0	1	0	0	1	0	0	0	0	0	0
08:00	0	54	1	0	55	0	12	0	0	12	0	3	0	0	3	0	0	0	0	0	0
08:15	0	53	4	0	57	0	19	1	0	20	0	1	0	0	1	0	0	0	0	0	0
08:30	0	70	2	0	72	0	6	0	0	6	0	1	0	0	1	0	0	0	0	0	0
08:45	0	77	2	0	79	0	15	0	0	15	0	2	0	0	2	0	0	0	0	0	0
09:00	0	61	2	0	63	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
09:15	0	65	3	0	68	0	17	0	0	17	0	1	0	0	1	0	0	0	0	0	0
09:30	0	53	12	0	65	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
09:45	0	73	2	0	75	0	22	1	0	23	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	0	641	33	0	674	0	152	4	0	156	0	15	0	0	15	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	0	125	4	0	129	0	16	2	0	18	0	0	0	0	0	0	0	0	0	0	0
12:15	0	109	7	0	116	0	24	2	0	26	0	0	0	0	0	0	0	0	0	0	0
12:30	0	121	10	0	131	0	24	3	0	27	0	1	0	0	1	0	0	0	0	0	0
12:45	0	115	7	0	122	0	19	1	0	20	0	0	0	0	0	0	0	0	0	0	0
13:00	0	127	2	0	129	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0
13:15	0	105	2	0	107	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
13:30	0	123	11	0	134	0	20	2	0	22	0	2	0	0	2	0	0	0	0	0	0
13:45	0	100	6	0	106	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	925	49	0	974	0	168	10	0	178	0	5	0	0	5	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	0	154	7	0	161	0	29	0	0	29	0	0	0	0	0	0	0	0	0	0	0
16:15	0	166	11	0	177	0	28	1	0	29	0	1	0	0	1	0	0	0	0	0	0
16:30	0	196	8	0	204	0	42	1	0	43	0	0	0	0	0	0	0	0	0	0	0
16:45	0	196	7	0	203	0	35	1	0	36	0	0	0	0	0	0	0	0	0	0	0
17:00	0	174	8	0	182	0	32	1	0	33	0	1	0	0	1	0	0	0	0	0	0
17:15	0	186	10	0	196	0	27	1	0	28	0	0	0	0	0	0	0	0	0	0	0
17:30	0	195	12	0	207	0	30	2	0	32	0	1	0	0	1	0	0	0	0	0	0
17:45	0	192	9	0	201	0	31	4	0	35	0	1	0	0	1	0	0	0	0	0	0
18:00	0	155	6	0	161	0	31	1	0	32	0	0	0	0	0	0	0	0	0	0	0
18:15	0	165	8	0	173	0	25	2	0	27	0	0	0	0	0	0	0	0	0	0	0
18:30	0	141	8	0	149	0	29	2	0	31	0	1	0	0	1	0	0	0	0	0	0
18:45	0	122	3	0	125	0	18	1	0	19	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	2042	97	0	2139	0	357	17	0	374	0	5	0	0	5	0	0	0	0	0	0
GRAND TOTAL	0	3608	179	0	3787	0	677	31	0	708	0	25	0	0	25	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	1	65	0	0	66	1	11	0	0	12	0	0	0	0	0	0	0	0	0	0	0
07:15	0	75	0	0	75	0	16	0	0	16	0	1	0	0	1	0	0	0	0	0	0
07:30	1	111	0	0	112	0	30	0	0	30	0	0	0	0	0	0	0	0	0	0	0
07:45	2	124	0	0	126	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0
08:00	0	110	0	0	110	1	21	0	0	22	0	1	0	0	1	0	0	0	0	0	0
08:15	3	121	0	0	124	1	20	0	0	21	0	0	0	0	0	0	0	0	0	0	0
08:30	1	125	0	0	126	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
08:45	3	134	0	0	137	0	23	0	0	23	0	1	0	0	1	0	0	0	0	0	0
09:00	3	82	0	0	85	2	16	0	0	18	0	0	0	0	0	0	0	0	0	0	0
09:15	3	111	0	0	114	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
09:30	1	108	0	0	109	0	16	0	0	16	0	1	0	0	1	0	0	0	0	0	0
09:45	2	121	0	0	123	0	24	0	0	24	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	20	1287	0	0	1307	5	233	0	0	238	0	7	0	0	7	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	2	119	0	0	121	1	24	0	0	25	0	1	0	0	1	0	0	0	0	0	0
12:15	1	86	0	0	87	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0
12:30	3	113	0	0	116	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
12:45	3	106	0	0	109	3	24	0	0	27	0	0	0	0	0	0	0	0	0	0	0
13:00	4	119	0	0	123	1	13	0	0	14	0	2	0	0	2	0	0	0	0	0	0
13:15	2	100	0	0	102	0	20	0	0	20	0	2	0	0	2	0	0	0	0	0	0
13:30	4	110	0	0	114	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
13:45	1	107	0	0	108	2	14	0	0	16	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	20	860	0	0	880	7	148	0	0	155	0	6	0	0	6	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	3	97	0	0	100	3	20	0	0	23	0	1	0	0	1	0	0	0	0	0	0
16:15	2	116	0	0	118	1	20	0	0	21	0	1	0	0	1	0	0	0	0	0	0
16:30	6	96	0	0	102	1	15	0	0	16	0	1	0	0	1	0	0	0	0	0	0
16:45	6	129	0	0	135	0	22	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:00	3	111	0	0	114	0	23	0	0	23	0	1	0	0	1	0	0	0	0	0	0
17:15	6	121	0	0	127	0	22	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:30	5	109	0	0	114	4	18	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:45	4	120	0	0	124	2	19	0	0	21	1	1	0	0	2	0	0	0	0	0	0
18:00	1	115	0	0	116	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	0
18:15	7	107	0	0	114	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
18:30	0	97	0	0	97	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
18:45	7	93	0	0	100	1	17	0	0	18	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	50	1311	0	0	1361	12	232	0	0	244	1	9	0	0	10	0	0	0	0	0	0
GRAND TOTAL	90	3458	0	0	3548	24	613	0	0	637	1	22	0	0	23	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Stuart Blvd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15	2	0	3	0	5	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
07:30	5	0	4	0	9	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45	7	0	5	0	12	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:00	7	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	4	0	4	0	8	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:30	4	0	3	0	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	4	0	5	0	9	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
09:00	4	0	5	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
09:15	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	9	0	2	0	11	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:45	12	0	0	0	12	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	63	0	37	0	100	6	0	7	0	13	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Stuart Blvd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	3	0	10	0	13	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15	9	0	2	0	11	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
12:30	7	0	4	0	11	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:45	8	0	5	0	13	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:00	5	0	2	0	7	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:15	5	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	8	0	1	0	9	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
13:45	5	0	3	0	8	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	50	0	29	0	79	9	0	6	0	15	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Stuart Blvd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Stuart Blvd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	0	0	6	0	6	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
16:15	5	0	3	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	6	0	8	0	14	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
16:45	1	0	3	0	4	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
17:00	6	0	4	0	10	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
17:15	5	0	4	0	9	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
17:30	2	0	11	0	13	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
17:45	4	0	12	0	16	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0
18:00	12	0	7	0	19	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
18:15	3	0	7	0	10	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
18:30	4	0	2	0	6	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0
18:45	6	0	3	0	9	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	54	0	70	0	124	14	0	13	0	27	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	167	0	136	0	303	29	0	26	0	55	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Stuart Blvd
Site ID: 1925700007
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	263	509	772
MT	53	85	138
HT	7	3	10
Bicycles	0	0	0
	323	**597**	**920**

Malden Rd

Bicycles	0	0	0
HT	0	7	0
MT	1	52	0
Cars	9	254	0
Totals	**10**	**313**	**0**

Peds: 0

Stuart Blvd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	2	19	**21**
0	0	3	15	**18**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	34	16	50
MT	5	3	8
HT	0	0	0
Bicycles	0	0	0
	39	**19**	**58**

Totals	**9**	**576**	**0**
Cars	7	490	0
MT	2	83	0
HT	0	3	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	497	269	766
MT	85	55	140
HT	3	7	10
Bicycles	0	0	0
	585	**331**	**916**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Stuart Blvd
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Stuart Blvd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00		69	1	0	0	70	1	132		0	0	133				0			7		3	0	0	10	213
08:15		73	5	0	0	78	4	141		0	0	145				0			4		5	0	0	9	232
08:30		77	2	0	0	79	1	145		0	0	146				0			4		4	0	0	8	233
08:45		94	2	0	0	96	3	158		0	0	161				0			6		6	0	0	12	269
Grand Total		**313**	**10**	**0**	**0**	**323**	**9**	**576**		**0**	**0**	**585**				**0**	**0**		**21**		**18**	**0**	**0**	**39**	**947**
Approach %		96.9	3.1	0		-	1.5	98.5		0		-					-		53.8		46.2	0		-	
Totals %		33.1	1.1	0		34.1	1	60.8		0		61.8					0		2.2		1.9	0		4.1	
PHF		**0.83**	**0.5**	**0**		**0.84**	**0.56**	**0.91**		**0**		**0.91**					**0**		**0.75**		**0.75**	**0**		**0.81**	**0.88**
Cars		254	9	0		263	7	490		0		497					0		19		15	0		34	794
% Cars		81.2	90	0		81.4	77.8	85.1		0		85					0		90.5		83.3	0		87.2	83.8
Medium Trucks		52	1	0		53	2	83		0		85					0		2		3	0		5	143
% Medium Trucks		16.6	10	0		16.4	22.2	14.4		0		14.5					0		9.5		16.7	0		12.8	15.1
Heavy Trucks		7	0	0		7	0	3		0		3					0		0		0	0		0	10
% Heavy Trucks		2.2	0	0		2.2	0	0.5		0		0.5					0		0		0	0		0	1.1
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Stuart Blvd
Site ID: 1925700007
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	498	451	949
MT	91	91	182
HT	1	2	3
Bicycles	0	0	0
	590	**544**	**1134**

Malden Rd

Bicycles	0	0	0
HT	0	1	0
MT	8	83	0
Cars	28	470	0
Totals	**36**	**554**	**0**

Peds: 0

Stuart Blvd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	3	27	**30**
0	0	3	21	**24**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	48	37	85
MT	6	12	18
HT	0	0	0
Bicycles	0	0	0
	54	**49**	**103**

Totals	**13**	**514**	**0**
Cars	9	424	0
MT	4	88	0
HT	0	2	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	433	491	924
MT	92	86	178
HT	2	1	3
Bicycles	0	0	0
	527	**578**	**1105**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Stuart Blvd
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Stuart Blvd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00		141	6	0	0	147	3	144		0	0	147				0			3		11	0	0	14	308
12:15		133	9	0	0	142	1	107		0	0	108				0			10		3	0	0	13	263
12:30		146	13	0	0	159	3	133		0	0	136				0			8		4	0	0	12	307
12:45		134	8	0	0	142	6	130		0	0	136				0			9		6	0	0	15	293
Grand Total		**554**	**36**	**0**	**0**	**590**	**13**	**514**		**0**	**0**	**527**				**0**	**0**		**30**		**24**	**0**	**0**	**54**	**1171**
Approach %		93.9	6.1	0		-	2.5	97.5		0		-					-		55.6		44.4	0		-	
Totals %		47.3	3.1	0		50.4	1.1	43.9		0		45					0		2.6		2	0		4.6	
PHF		**0.95**	**0.69**	**0**		**0.93**	**0.54**	**0.89**		**0**		**0.9**					**0**		**0.75**		**0.55**	**0**		**0.9**	**0.95**
Cars		470	28	0		498	9	424		0		433					0		27		21	0		48	979
% Cars		84.8	77.8	0		84.4	69.2	82.5		0		82.2					0		90		87.5	0		88.9	83.6
Medium Trucks		83	8	0		91	4	88		0		92					0		3		3	0		6	189
% Medium Trucks		15	22.2	0		15.4	30.8	17.1		0		17.5					0		10		12.5	0		11.1	16.1
Heavy Trucks		1	0	0		1	0	2		0		2					0		0		0	0		0	3
% Heavy Trucks		0.2	0	0		0.2	0	0.4		0		0.4					0		0		0	0		0	0.3
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:00:00
To:	19:00:00	To:	18:00:00

Intersection: Malden Rd & Stuart Blvd
Site ID: 1925700007
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	786	478	1264
MT	128	86	214
HT	3	4	7
Bicycles	0	0	0
	917	**568**	**1485**

Malden Rd

Bicycles	0	0	0
HT	0	3	0
MT	8	120	0
Cars	39	747	0
Totals	**47**	**870**	**0**

Peds: 0

Stuart Blvd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	4	17	**21**
0	0	6	31	**37**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	48	57	105
MT	10	14	24
HT	0	1	1
Bicycles	0	0	0
	58	**72**	**130**

Totals	**25**	**547**	**0**
Cars	18	461	0
MT	6	82	0
HT	1	4	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	479	778	1257
MT	88	126	214
HT	5	3	8
Bicycles	0	0	0
	572	**907**	**1479**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Stuart Blvd
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:00 - 18:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Stuart Blvd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:00		207	9	0	0	216	3	135		0	0	138				0			6		5	0	0	11	365
17:15		213	11	0	0	224	6	144		0	0	150				0			6		5	0	0	11	385
17:30		226	14	0	0	240	9	128		0	0	137				0			3		13	0	0	16	393
17:45		224	13	0	0	237	7	140		0	0	147				0			6		14	0	0	20	404
Grand Total		**870**	**47**	**0**	**0**	**917**	**25**	**547**		**0**	**0**	**572**				**0**	**0**		**21**		**37**	**0**	**0**	**58**	**1547**
Approach %		94.9	5.1	0		-	4.4	95.6		0		-					-		36.2		63.8	0		-	
Totals %		56.2	3	0		59.3	1.6	35.4		0		37					0		1.4		2.4	0		3.7	
PHF		**0.96**	**0.84**	**0**		**0.96**	**0.69**	**0.95**		**0**		**0.95**					**0**		**0.88**		**0.66**	**0**		**0.73**	**0.96**
Cars		747	39	0		786	18	461		0		479					0		17		31	0		48	1313
% Cars		85.9	83	0		85.7	72	84.3		0		83.7					0		81		83.8	0		82.8	84.9
Medium Trucks		120	8	0		128	6	82		0		88					0		4		6	0		10	226
% Medium Trucks		13.8	17	0		14	24	15		0		15.4					0		19		16.2	0		17.2	14.6
Heavy Trucks		3	0	0		3	1	4		0		5					0		0		0	0		0	8
% Heavy Trucks		0.3	0	0		0.3	4	0.7		0		0.9					0		0		0	0		0	0.5
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

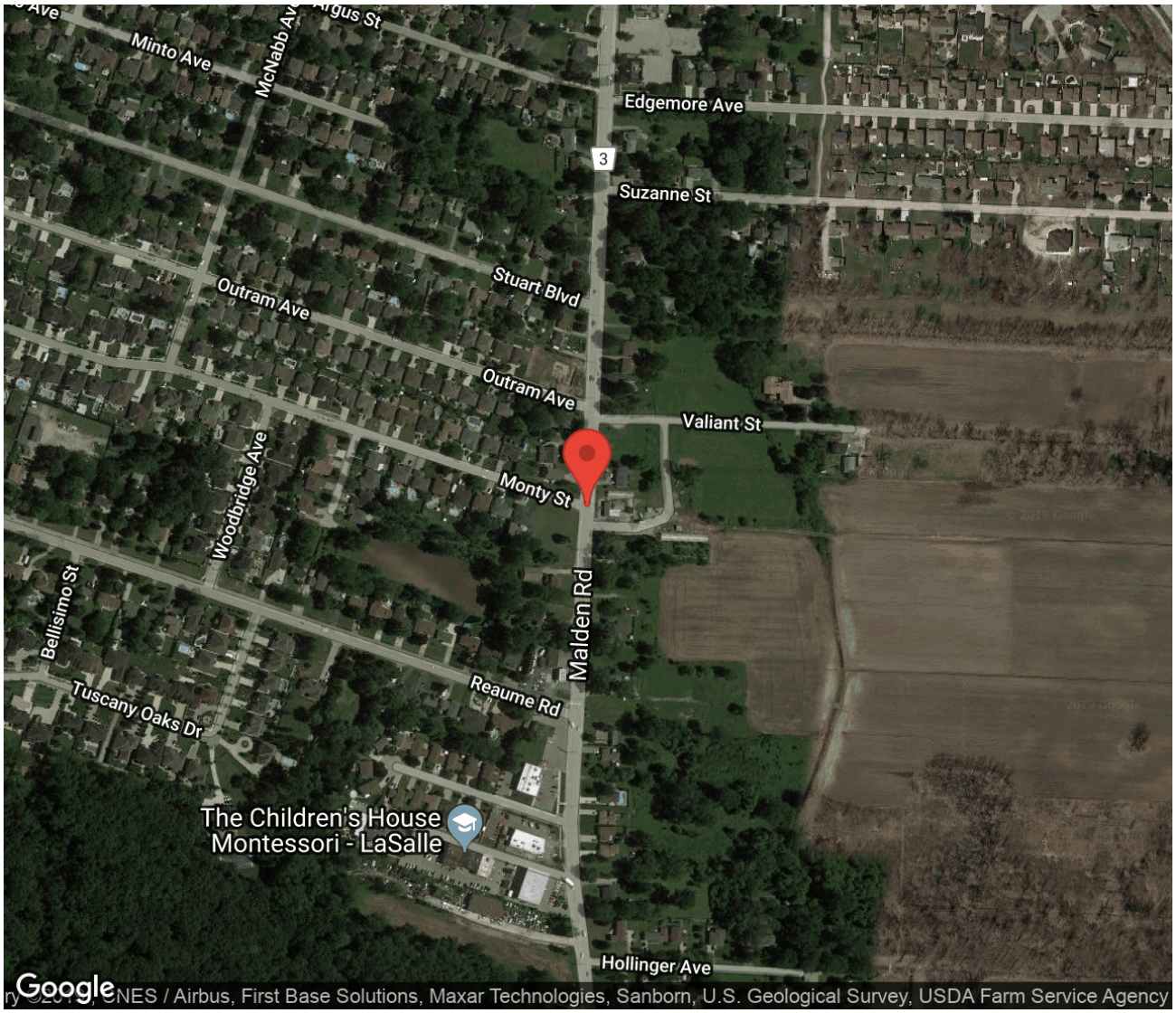
Intersection Count Report

Intersection:	Malden Rd & Monty St
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700008
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection:	Malden Rd & Monty St
Municipality:	LaSalle
Count Date:	Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	2	175	8	0	185	1	4	437	1	0	442	0
08:00 - 09:00	2	328	5	0	335	0	7	557	3	0	567	0
09:00 - 10:00	2	314	17	0	333	0	6	491	9	0	506	1
BREAK												
12:00 - 13:00	10	555	13	0	578	1	7	511	5	0	523	1
13:00 - 14:00	5	519	26	0	550	1	4	482	7	0	493	0
BREAK												
16:00 - 17:00	4	831	31	0	866	0	10	517	8	0	535	1
17:00 - 18:00	0	872	31	0	903	0	18	544	0	0	562	0
18:00 - 19:00	0	689	19	0	708	0	7	481	0	0	488	0
GRAND TOTAL	**25**	**4283**	**150**	**0**	**4458**	**3**	**63**	**4020**	**33**	**0**	**4116**	**3**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

Commercial Access - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	0	0	0	0	7	10	0	11	0	21	0
08:00 - 09:00	1	0	0	0	1	13	18	0	12	0	30	2
09:00 - 10:00	0	0	0	0	0	34	15	0	7	0	22	0
BREAK												
12:00 - 13:00	0	0	1	0	1	43	16	1	2	0	19	0
13:00 - 14:00	2	0	3	0	5	33	26	0	6	0	32	0
BREAK												
16:00 - 17:00	2	0	3	0	5	31	21	0	14	0	35	0
17:00 - 18:00	0	0	0	0	0	8	19	0	11	0	30	0
18:00 - 19:00	0	0	0	0	0	0	22	0	16	0	38	1
GRAND TOTAL	**5**	**0**	**7**	**0**	**12**	**169**	**147**	**1**	**79**	**0**	**227**	**3**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	29	1	0	30	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
07:15	0	46	0	0	46	1	7	0	0	8	0	1	0	0	1	0	0	0	0	0	1
07:30	1	27	2	0	30	0	9	1	0	10	0	1	0	0	1	0	0	0	0	0	0
07:45	0	37	3	0	40	0	13	1	0	14	0	1	0	0	1	0	0	0	0	0	0
08:00	0	56	1	0	57	0	10	2	0	12	0	3	0	0	3	0	0	0	0	0	0
08:15	1	58	1	0	60	0	20	0	0	20	0	1	0	0	1	0	0	0	0	0	0
08:30	0	76	0	0	76	0	7	0	0	7	0	1	0	0	1	0	0	0	0	0	0
08:45	1	78	1	0	80	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
09:00	1	63	3	0	67	0	9	2	0	11	0	0	0	0	0	0	0	0	0	0	0
09:15	0	65	0	0	65	0	16	1	0	17	0	1	0	0	1	0	0	0	0	0	0
09:30	0	52	3	0	55	0	15	2	0	17	0	2	0	0	2	0	0	0	0	0	0
09:45	1	70	2	0	73	0	19	4	0	23	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	5	657	17	0	679	1	145	13	0	159	0	15	0	0	15	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	2	125	6	0	133	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	0
12:15	2	107	3	0	112	0	24	1	0	25	0	0	0	0	0	0	0	0	0	0	0
12:30	1	123	1	0	125	0	24	0	0	24	0	1	0	0	1	0	0	0	0	0	1
12:45	4	115	2	0	121	1	19	0	0	20	0	0	0	0	0	0	0	0	0	0	0
13:00	5	114	6	0	125	0	18	1	0	19	0	0	0	0	0	0	0	0	0	0	0
13:15	0	106	4	0	110	0	14	2	0	16	0	2	0	0	2	0	0	0	0	0	0
13:30	0	115	5	0	120	0	20	1	0	21	0	2	0	0	2	0	0	0	0	0	1
13:45	0	100	3	0	103	0	28	4	0	32	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	14	905	30	0	949	1	164	9	0	174	0	5	0	0	5	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	1	151	8	0	160	0	30	0	0	30	0	0	0	0	0	0	0	0	0	0	0
16:15	2	160	7	0	169	0	28	0	0	28	0	1	0	0	1	0	0	0	0	0	0
16:30	0	196	6	0	202	0	43	0	0	43	0	0	0	0	0	0	0	0	0	0	0
16:45	1	190	9	0	200	0	32	1	0	33	0	0	0	0	0	0	0	0	0	0	0
17:00	0	173	7	0	180	0	32	0	0	32	0	1	0	0	1	0	0	0	0	0	0
17:15	0	181	9	0	190	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	0
17:30	0	196	6	0	202	0	31	1	0	32	0	1	0	0	1	0	0	0	0	0	0
17:45	0	197	7	0	204	0	32	1	0	33	0	1	0	0	1	0	0	0	0	0	0
18:00	0	156	6	0	162	0	30	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:15	0	165	6	0	171	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	0
18:30	0	140	5	0	145	0	31	0	0	31	0	1	0	0	1	0	0	0	0	0	0
18:45	0	120	1	0	121	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	4	2025	77	0	2106	0	362	4	0	366	0	5	0	0	5	0	0	0	0	0	0
GRAND TOTAL	23	3587	124	0	3734	2	671	26	0	699	0	25	0	0	25	0	0	0	0	0	3

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	1	57	0	0	58	1	12	0	0	13	0	0	0	0	0	0	0	0	0	0	0
07:15	0	73	1	0	74	0	16	0	0	16	0	1	0	0	1	0	0	0	0	0	0
07:30	0	109	0	0	109	1	30	0	0	31	0	0	0	0	0	0	0	0	0	0	0
07:45	1	122	0	0	123	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	0
08:00	1	101	1	0	103	0	20	0	0	20	0	1	0	0	1	0	0	0	0	0	0
08:15	3	122	1	0	126	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0
08:30	1	121	0	0	122	0	20	0	0	20	0	1	0	0	1	0	0	0	0	0	0
08:45	2	126	1	0	129	0	23	0	0	23	0	1	0	0	1	0	0	0	0	0	0
09:00	2	80	2	0	84	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	1
09:15	0	113	4	0	117	1	18	0	0	19	0	1	0	0	1	0	0	0	0	0	0
09:30	0	105	1	0	106	1	16	1	0	18	0	1	0	0	1	0	0	0	0	0	0
09:45	1	116	1	0	118	1	22	0	0	23	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	12	1245	12	0	1269	5	233	1	0	239	0	7	0	0	7	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	1	114	1	0	116	0	25	0	0	25	0	1	0	0	1	0	0	0	0	0	0
12:15	3	86	3	0	92	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0
12:30	1	114	1	0	116	1	19	0	0	20	0	1	0	0	1	0	0	0	0	0	0
12:45	1	106	0	0	107	0	26	0	0	26	0	0	0	0	0	0	0	0	0	0	1
13:00	1	115	2	0	118	0	14	0	0	14	0	3	0	0	3	0	0	0	0	0	0
13:15	1	97	1	0	99	0	20	0	0	20	0	2	0	0	2	0	0	0	0	0	0
13:30	0	102	3	0	105	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
13:45	2	103	1	0	106	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	10	837	12	0	859	1	149	0	0	150	0	7	0	0	7	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	1	99	1	0	101	0	23	0	0	23	0	1	0	0	1	0	0	0	0	0	0
16:15	4	113	3	0	120	0	21	0	0	21	0	1	0	0	1	0	0	0	0	0	1
16:30	3	96	3	0	102	0	14	1	0	15	0	1	0	0	1	0	0	0	0	0	0
16:45	1	127	0	0	128	1	20	0	0	21	0	1	0	0	1	0	0	0	0	0	0
17:00	3	106	0	0	109	1	22	0	0	23	0	1	0	0	1	0	0	0	0	0	0
17:15	4	119	0	0	123	1	21	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:30	2	108	0	0	110	1	22	0	0	23	0	1	0	0	1	0	0	0	0	0	0
17:45	5	121	0	0	126	1	20	0	0	21	0	2	0	0	2	0	0	0	0	0	0
18:00	2	112	0	0	114	0	22	0	0	22	0	0	0	0	0	0	0	0	0	0	0
18:15	3	109	0	0	112	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
18:30	0	93	0	0	93	0	14	0	0	14	0	1	0	0	1	0	0	0	0	0	0
18:45	1	98	0	0	99	1	18	0	0	19	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	29	1301	7	0	1337	6	231	1	0	238	0	10	0	0	10	0	0	0	0	0	1
GRAND TOTAL	**51**	**3383**	**31**	**0**	**3465**	**12**	**613**	**2**	**0**	**627**	**0**	**24**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**3**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
SUBTOTAL	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	54

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	12
13:00	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
13:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
13:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
SUBTOTAL	2	0	3	0	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	76

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Commercial Access

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
16:15	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
GRAND TOTAL	4	0	6	0	10	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	169

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Monty St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	2	0	3	0	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:00	9	0	2	0	11	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:15	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	4	0	4	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
08:45	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
09:00	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:15	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	3	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	6	0	0	0	6	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	38	0	26	0	64	5	0	4	0	9	0	0	0	0	0	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Monty St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	6	0	0	0	6	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:15	2	0	1	0	3	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	6	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	3	0	2	0	5	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30	8	0	0	0	8	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13:45	5	0	2	0	7	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	34	1	7	0	42	8	0	1	0	9	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Monty St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Monty St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	1	0	1	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
16:15	3	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	6	0	4	0	10	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
16:45	8	0	3	0	11	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:00	6	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	4	0	4	0	8	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:30	5	0	3	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	2	0	3	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18:00	4	0	2	0	6	5	0	4	0	9	0	0	0	0	0	0	0	0	0	0	1
18:15	4	0	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	2	0	3	0	5	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
18:45	5	0	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	50	0	35	0	85	12	0	6	0	18	0	0	0	0	0	0	0	0	0	0	1
GRAND TOTAL	122	1	68	0	191	25	0	11	0	36	0	0	0	0	0	0	0	0	0	0	3

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Monty St
Site ID: 1925700008
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	273	485	758
MT	55	87	142
HT	7	3	10
Bicycles	0	0	0
	335	**575**	**910**

Malden Rd

Bicycles	0	0	0	0
HT	0	7	0	0
MT	2	53	0	0
Cars	3	268	2	0
Totals	**5**	**328**	**2**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	0	5	5
MT	1	0	1
HT	0	0	0
Bicycles	0	0	0
	1	**5**	**6**

Monty St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	3	15	**18**
0	0	0	0	**0**
0	0	1	11	**12**

Peds: 2



Peds: 13

Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	1	0	0

Peds: 0

West Approach

	Out	In	Total
Cars	26	10	36
MT	4	2	6
HT	0	0	0
Bicycles	0	0	0
	30	**12**	**42**

Malden Rd

Totals	**7**	**557**	**3**	**0**
Cars	7	470	3	0
MT	0	84	0	0
HT	0	3	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	480	279	759
MT	84	55	139
HT	3	7	10
Bicycles	0	0	0
	567	**341**	**908**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Monty St
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Monty St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	0	69	3	0	0	72	1	122	1	0	0	124	1	0	0	0	2	1	11	0	2	0	0	13	210
08:15	1	79	1	0	0	81	3	143	1	0	0	147	0	0	0	0	6	0	3	0	2	0	0	5	233
08:30	0	84	0	0	0	84	1	142	0	0	0	143	0	0	0	0	2	0	1	0	5	0	0	6	233
08:45	1	96	1	0	0	98	2	150	1	0	0	153	0	0	0	0	3	0	3	0	3	0	2	6	257
Grand Total	**2**	**328**	**5**	**0**	**0**	**335**	**7**	**557**	**3**	**0**	**0**	**567**	**1**	**0**	**0**	**0**	**13**	**1**	**18**	**0**	**12**	**0**	**2**	**30**	**933**
Approach %	0.6	97.9	1.5	0		-	1.2	98.2	0.5	0		-	100	0	0	0		-	60	0	40	0		-	
Totals %	0.2	35.2	0.5	0		35.9	0.8	59.7	0.3	0		60.8	0.1	0	0	0		0.1	1.9	0	1.3	0		3.2	
PHF	**0.5**	**0.85**	**0.42**	**0**		**0.85**	**0.58**	**0.93**	**0.75**	**0**		**0.93**	**0.25**	**0**	**0**	**0**		**0.25**	**0.41**	**0**	**0.6**	**0**		**0.58**	**0.91**
Cars	2	268	3	0		273	7	470	3	0		480	0	0	0	0		0	15	0	11	0		26	779
% Cars	100	81.7	60	0		81.5	100	84.4	100	0		84.7	0	0	0	0		0	83.3	0	91.7	0		86.7	83.5
Medium Trucks	0	53	2	0		55	0	84	0	0		84	1	0	0	0		1	3	0	1	0		4	144
% Medium Trucks	0	16.2	40	0		16.4	0	15.1	0	0		14.8	100	0	0	0		100	16.7	0	8.3	0		13.3	15.4
Heavy Trucks	0	7	0	0		7	0	3	0	0		3	0	0	0	0		0	0	0	0	0		0	10
% Heavy Trucks	0	2.1	0	0		2.1	0	0.5	0	0		0.5	0	0	0	0		0	0	0	0	0		0	1.1
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					13	-					2	-	15
% Peds					0	-					0	-					86.7	-					13.3	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Monty St
Site ID: 1925700008
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	491	432	923
MT	86	94	180
HT	1	2	3
Bicycles	0	0	0
	578	**528**	**1106**

Malden Rd

Bicycles	0	0	0	0
HT	0	1	0	0
MT	1	84	1	0
Cars	12	470	9	0
Totals	**13**	**555**	**10**	**0**

East Approach

	Out	In	Total
Cars	0	15	15
MT	1	1	2
HT	0	0	0
Bicycles	0	0	0
	1	**16**	**17**

Monty St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	4	12	**16**
0	0	0	1	**1**
0	0	0	2	**2**

Peds: 0

Peds: 1



Peds: 43

Peds: 1

Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
1	0	1	0	0
0	0	0	0	0
0	0	0	0	0

West Approach

	Out	In	Total
Cars	15	18	33
MT	4	2	6
HT	0	0	0
Bicycles	0	0	0
	19	**20**	**39**

Malden Rd

Totals	**7**	**511**	**5**	**0**
Cars	6	420	5	0
MT	1	89	0	0
HT	0	2	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	431	472	903
MT	90	84	174
HT	2	1	3
Bicycles	0	0	0
	523	**557**	**1080**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Monty St
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Monty St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	2	142	6	0	0	150	1	140	1	0	0	142	0	0	0	0	7	0	8	0	0	0	0	8	300
12:15	2	131	4	0	0	137	3	105	3	0	0	111	0	0	0	0	21	0	4	0	1	0	0	5	253
12:30	1	148	1	0	1	150	2	134	1	0	0	137	0	0	0	0	3	0	1	0	1	0	0	2	289
12:45	5	134	2	0	0	141	1	132	0	0	1	133	0	0	1	0	12	1	3	1	0	0	0	4	279
Grand Total	**10**	**555**	**13**	**0**	**1**	**578**	**7**	**511**	**5**	**0**	**1**	**523**	**0**	**0**	**1**	**0**	**43**	**1**	**16**	**1**	**2**	**0**	**0**	**19**	**1121**
Approach %	1.7	96	2.2	0		-	1.3	97.7	1	0		-	0	0	100	0		-	84.2	5.3	10.5	0		-	
Totals %	0.9	49.5	1.2	0		51.6	0.6	45.6	0.4	0		46.7	0	0	0.1	0		0.1	1.4	0.1	0.2	0		1.7	
PHF	**0.5**	**0.94**	**0.54**	**0**		**0.96**	**0.58**	**0.91**	**0.42**	**0**		**0.92**	**0**	**0**	**0.25**	**0**		**0.25**	**0.5**	**0.25**	**0.5**	**0**		**0.59**	**0.93**
Cars	9	470	12	0		491	6	420	5	0		431	0	0	0	0		0	12	1	2	0		15	937
% Cars	90	84.7	92.3	0		84.9	85.7	82.2	100	0		82.4	0	0	0	0		0	75	100	100	0		78.9	83.6
Medium Trucks	1	84	1	0		86	1	89	0	0		90	0	0	1	0		1	4	0	0	0		4	181
% Medium Trucks	10	15.1	7.7	0		14.9	14.3	17.4	0	0		17.2	0	0	100	0		100	25	0	0	0		21.1	16.1
Heavy Trucks	0	1	0	0		1	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	3
% Heavy Trucks	0	0.2	0	0		0.2	0	0.4	0	0		0.4	0	0	0	0		0	0	0	0	0		0	0.3
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					1	-					43	-					0	-	45
% Peds					2.2	-					2.2	-					95.6	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:45:00
To:	19:00:00	To:	17:45:00

Intersection: Malden Rd & Monty St
Site ID: 1925700008
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	772	483	1255
MT	124	87	211
HT	2	4	6
Bicycles	0	0	0
	898	**574**	**1472**

Malden Rd

Bicycles	0	0	0	0
HT	0	2	0	0
MT	2	122	0	0
Cars	31	740	1	0
Totals	**33**	**864**	**1**	**0**

East Approach

	Out	In	Total
Cars	0	1	1
MT	0	0	0
HT	0	0	0
Bicycles	0	0	0
	0	**1**	**1**

Monty St

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	2	23	**25**
0	0	0	0	**0**
0	0	0	11	**11**

Peds: 0

Peds: 0



Peds: 11

Peds: 0

Commercial Access

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

West Approach

	Out	In	Total
Cars	34	41	75
MT	2	6	8
HT	0	0	0
Bicycles	0	0	0
	36	**47**	**83**

Malden Rd

Totals	**14**	**549**	**0**	**0**
Cars	10	460	0	0
MT	4	85	0	0
HT	0	4	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	470	751	1221
MT	89	122	211
HT	4	2	6
Bicycles	0	0	0
	563	**875**	**1438**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Monty St
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Commercial Access						West Approach Monty St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:45	1	222	10	0	0	233	2	148	0	0	0	150	0	0	0	0	4	0	9	0	3	0	0	12	395
17:00	0	206	7	0	0	213	4	129	0	0	0	133	0	0	0	0	2	0	6	0	1	0	0	7	353
17:15	0	208	9	0	0	217	5	141	0	0	0	146	0	0	0	0	4	0	5	0	4	0	0	9	372
17:30	0	228	7	0	0	235	3	131	0	0	0	134	0	0	0	0	1	0	5	0	3	0	0	8	377
Grand Total	**1**	**864**	**33**	**0**	**0**	**898**	**14**	**549**	**0**	**0**	**0**	**563**	**0**	**0**	**0**	**0**	**11**	**0**	**25**	**0**	**11**	**0**	**0**	**36**	**1497**
Approach %	0.1	96.2	3.7	0		-	2.5	97.5	0	0		-	0	0	0	0		-	69.4	0	30.6	0		-	
Totals %	0.1	57.7	2.2	0		60	0.9	36.7	0	0		37.6	0	0	0	0		0	1.7	0	0.7	0		2.4	
PHF	**0.25**	**0.95**	**0.83**	**0**		**0.96**	**0.7**	**0.93**	**0**	**0**		**0.94**	**0**	**0**	**0**	**0**		**0**	**0.69**	**0**	**0.69**	**0**		**0.75**	**0.95**
Cars	1	740	31	0		772	10	460	0	0		470	0	0	0	0		0	23	0	11	0		34	1276
% Cars	100	85.6	93.9	0		86	71.4	83.8	0	0		83.5	0	0	0	0		0	92	0	100	0		94.4	85.2
Medium Trucks	0	122	2	0		124	4	85	0	0		89	0	0	0	0		0	2	0	0	0		2	215
% Medium Trucks	0	14.1	6.1	0		13.8	28.6	15.5	0	0		15.8	0	0	0	0		0	8	0	0	0		5.6	14.4
Heavy Trucks	0	2	0	0		2	0	4	0	0		4	0	0	0	0		0	0	0	0	0		0	6
% Heavy Trucks	0	0.2	0	0		0.2	0	0.7	0	0		0.7	0	0	0	0		0	0	0	0	0		0	0.4
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					11	-					0	-	11
% Peds					0	-					0	-					100	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

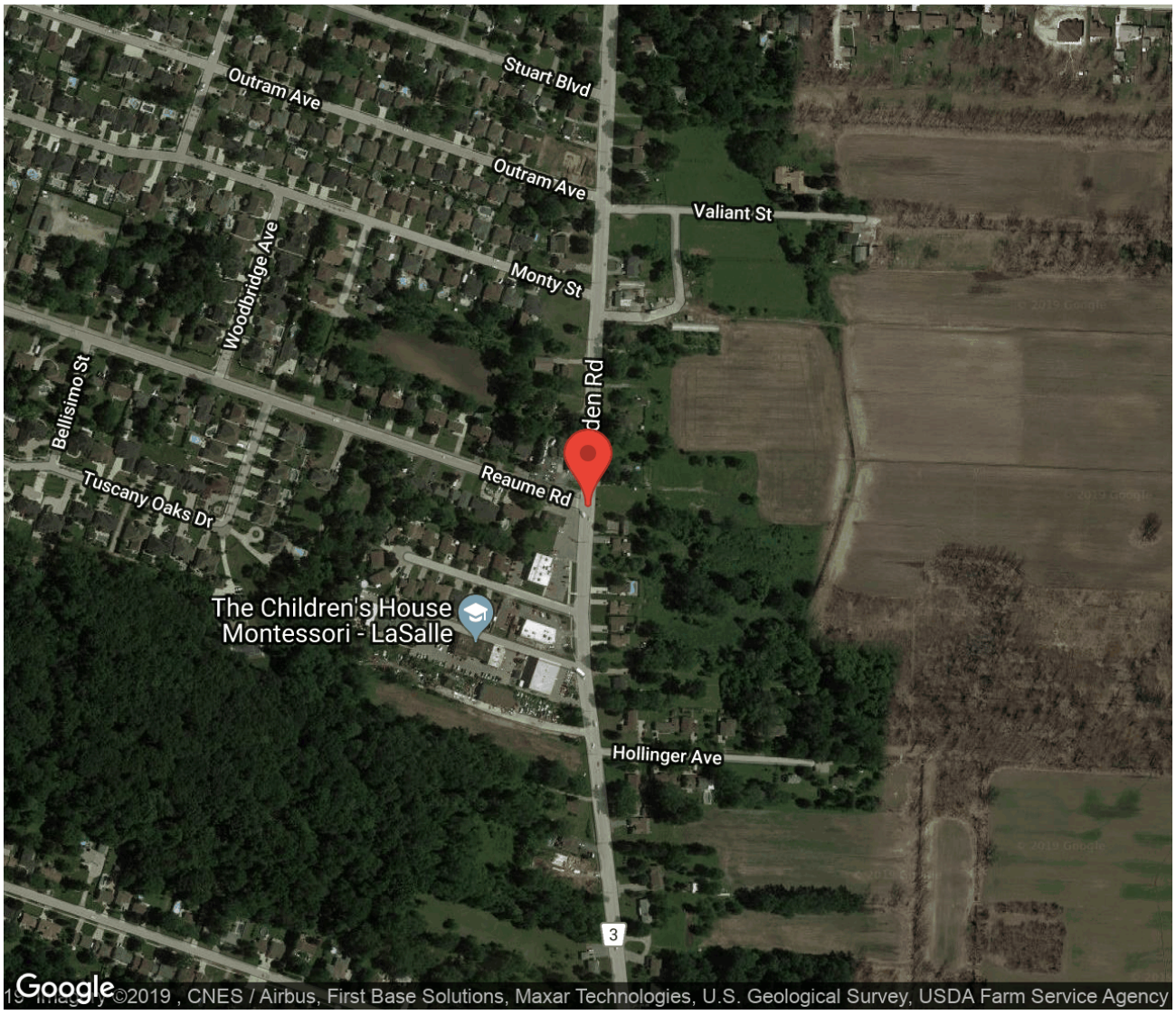
Intersection Count Report

Intersection:	Malden Rd & Reaume Rd
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700009
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection:	Malden Rd & Reaume Rd
Municipality:	LaSalle
Count Date:	Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	163	22	0	185	0	23	399	0	0	422	0
08:00 - 09:00	0	285	48	0	333	0	33	507	0	0	540	0
09:00 - 10:00	0	273	46	0	319	1	25	430	0	0	455	0
BREAK												
12:00 - 13:00	0	471	88	0	559	1	35	453	0	0	488	0
13:00 - 14:00	0	428	91	0	519	1	31	431	0	0	462	0
BREAK												
16:00 - 17:00	0	694	150	0	844	0	41	471	0	0	512	0
17:00 - 18:00	0	740	125	0	865	2	48	500	0	0	548	0
18:00 - 19:00	0	611	99	0	710	0	42	428	0	0	470	0
GRAND TOTAL	**0**	**3665**	**669**	**0**	**4334**	**5**	**278**	**3619**	**0**	**0**	**3897**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

Reaume Rd - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	0	0	0	0	0	43	0	37	0	80	0
08:00 - 09:00	0	0	0	0	0	0	54	0	41	0	95	0
09:00 - 10:00	0	0	0	0	0	0	70	0	21	0	91	0
BREAK												
12:00 - 13:00	0	0	0	0	0	0	63	0	29	0	92	0
13:00 - 14:00	0	0	0	0	0	0	59	0	34	0	93	0
BREAK												
16:00 - 17:00	0	0	0	0	0	0	57	0	45	0	102	0
17:00 - 18:00	0	0	0	0	0	0	56	0	45	0	101	0
18:00 - 19:00	0	0	0	0	0	0	58	0	60	0	118	0
GRAND TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**460**	**0**	**312**	**0**	**772**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	28	5	0	33	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0
07:15	0	41	5	0	46	0	7	0	0	7	0	1	0	0	1	0	0	0	0	0	0
07:30	0	25	4	0	29	0	9	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:45	0	34	6	0	40	0	13	1	0	14	0	1	0	0	1	0	0	0	0	0	0
08:00	0	51	5	0	56	0	8	3	0	11	0	2	1	0	3	0	0	0	0	0	0
08:15	0	49	11	0	60	0	14	5	0	19	0	1	0	0	1	0	0	0	0	0	0
08:30	0	68	10	0	78	0	5	3	0	8	0	1	0	0	1	0	0	0	0	0	0
08:45	0	72	6	0	78	0	12	4	0	16	0	2	0	0	2	0	0	0	0	0	0
09:00	0	55	8	0	63	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	1
09:15	0	55	9	0	64	0	13	3	0	16	0	0	0	0	0	0	0	0	0	0	0
09:30	0	49	8	0	57	0	14	1	0	15	0	2	0	0	2	0	0	0	0	0	0
09:45	0	56	14	0	70	0	18	1	0	19	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	583	91	0	674	0	124	24	0	148	0	14	1	0	15	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	108	21	0	129	0	9	8	0	17	0	0	0	0	0	0	0	0	0	0	0
12:15	0	89	18	0	107	0	21	3	0	24	0	0	0	0	0	0	0	0	0	0	0
12:30	0	108	15	0	123	0	21	3	0	24	0	1	0	0	1	0	0	0	0	0	0
12:45	0	97	18	0	115	0	17	2	0	19	0	0	0	0	0	0	0	0	0	0	1
13:00	0	96	19	0	115	0	13	5	0	18	0	0	0	0	0	0	0	0	0	0	0
13:15	0	85	20	0	105	0	13	2	0	15	0	3	0	0	3	0	0	0	0	0	0
13:30	0	95	17	0	112	0	16	4	0	20	0	2	0	0	2	0	0	0	0	0	1
13:45	0	80	20	0	100	0	24	4	0	28	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	758	148	0	906	0	134	31	0	165	0	7	0	0	7	0	0	0	0	0	2

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	0	120	34	0	154	0	22	10	0	32	0	0	0	0	0	0	0	0	0	0	0
16:15	0	134	27	0	161	0	24	4	0	28	0	1	0	0	1	0	0	0	0	0	0
16:30	0	173	27	0	200	0	39	4	0	43	0	0	0	0	0	0	0	0	0	0	0
16:45	0	152	41	0	193	0	29	3	0	32	0	0	0	0	0	0	0	0	0	0	0
17:00	0	149	20	0	169	0	22	9	0	31	0	1	0	0	1	0	0	0	0	0	0
17:15	0	163	23	0	186	0	23	4	0	27	0	0	0	0	0	0	0	0	0	0	0
17:30	0	168	27	0	195	0	26	5	0	31	0	0	1	0	1	0	0	0	0	0	1
17:45	0	163	29	0	192	0	24	7	0	31	0	1	0	0	1	0	0	0	0	0	1
18:00	0	147	17	0	164	0	25	8	0	33	0	0	0	0	0	0	0	0	0	0	0
18:15	0	146	24	0	170	0	20	7	0	27	0	0	0	0	0	0	0	0	0	0	0
18:30	0	121	21	0	142	0	24	4	0	28	0	1	0	0	1	0	0	0	0	0	0
18:45	0	111	14	0	125	0	16	4	0	20	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1747	304	0	2051	0	294	69	0	363	0	4	1	0	5	0	0	0	0	0	2
GRAND TOTAL	0	3088	543	0	3631	0	552	124	0	676	0	25	2	0	27	0	0	0	0	0	5

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	4	47	0	0	51	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
07:15	1	72	0	0	73	1	14	0	0	15	1	1	0	0	2	0	0	0	0	0	0
07:30	3	97	0	0	100	4	28	0	0	32	1	0	0	0	1	0	0	0	0	0	0
07:45	5	111	0	0	116	3	16	0	0	19	0	0	0	0	0	0	0	0	0	0	0
08:00	4	95	0	0	99	1	17	0	0	18	0	1	0	0	1	0	0	0	0	0	0
08:15	8	116	0	0	124	2	19	0	0	21	1	0	0	0	1	0	0	0	0	0	0
08:30	8	109	0	0	117	2	18	0	0	20	0	1	0	0	1	0	0	0	0	0	0
08:45	6	111	0	0	117	1	19	0	0	20	0	1	0	0	1	0	0	0	0	0	0
09:00	6	71	0	0	77	0	16	0	0	16	2	0	0	0	2	0	0	0	0	0	0
09:15	5	98	0	0	103	0	17	0	0	17	0	1	0	0	1	0	0	0	0	0	0
09:30	2	88	0	0	90	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
09:45	7	103	0	0	110	2	20	0	0	22	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	59	1118	0	0	1177	16	212	0	0	228	6	6	0	0	12	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	9	105	0	0	114	1	22	0	0	23	0	1	0	0	1	0	0	0	0	0	0
12:15	7	79	0	0	86	2	15	0	0	17	0	0	0	0	0	0	0	0	0	0	0
12:30	5	97	0	0	102	0	17	0	0	17	1	1	0	0	2	0	0	0	0	0	0
12:45	6	91	0	0	97	3	25	0	0	28	1	0	0	0	1	0	0	0	0	0	0
13:00	5	108	0	0	113	2	14	0	0	16	0	3	0	0	3	0	0	0	0	0	0
13:15	6	90	0	0	96	2	17	0	0	19	0	2	0	0	2	0	0	0	0	0	0
13:30	6	87	0	0	93	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
13:45	7	86	0	0	93	3	12	0	0	15	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	51	743	0	0	794	13	134	0	0	147	2	7	0	0	9	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	10	89	0	0	99	3	20	0	0	23	0	1	0	0	1	0	0	0	0	0	0
16:15	9	100	0	0	109	1	18	0	0	19	0	1	0	0	1	0	0	0	0	0	0
16:30	6	97	0	0	103	1	12	0	0	13	1	0	0	0	1	0	0	0	0	0	0
16:45	8	115	0	0	123	2	17	0	0	19	0	1	0	0	1	0	0	0	0	0	0
17:00	9	95	0	0	104	0	21	0	0	21	0	1	0	0	1	0	0	0	0	0	0
17:15	11	111	0	0	122	0	20	0	0	20	1	1	0	0	2	0	0	0	0	0	0
17:30	12	96	0	0	108	3	19	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:45	12	112	0	0	124	0	21	0	0	21	0	2	0	0	2	0	0	0	0	0	0
18:00	9	106	0	0	115	0	17	0	0	17	1	0	0	0	1	0	0	0	0	0	0
18:15	12	99	0	0	111	1	12	0	0	13	0	0	0	0	0	0	0	0	0	0	0
18:30	8	76	0	0	84	1	14	0	0	15	0	1	0	0	1	0	0	0	0	0	0
18:45	8	86	0	0	94	1	17	0	0	18	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	114	1182	0	0	1296	13	208	0	0	221	4	9	0	0	13	0	0	0	0	0	0
GRAND TOTAL	224	3043	0	0	3267	42	554	0	0	596	12	22	0	0	34	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Reaume Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	9	0	2	0	11	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15	4	0	6	0	10	2	0	6	0	8	0	0	0	0	0	0	0	0	0	0	0
07:30	12	0	9	0	21	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0
07:45	12	0	9	0	21	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
08:00	9	0	6	0	15	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0
08:15	10	0	9	0	19	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	12	0	10	0	22	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	16	0	8	0	24	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0
09:00	10	0	3	0	13	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0
09:15	15	0	2	0	17	2	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0
09:30	18	0	3	0	21	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
09:45	15	0	6	0	21	3	0	1	0	4	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	142	0	73	0	215	24	0	26	0	50	1	0	0	0	1	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Reaume Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	9	0	8	0	17	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0
12:15	11	0	6	0	17	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0
12:30	18	0	9	0	27	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
12:45	15	0	3	0	18	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13:00	10	0	7	0	17	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
13:15	9	0	4	0	13	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
13:30	15	0	9	0	24	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
13:45	19	0	7	0	26	2	0	3	0	5	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	106	0	53	0	159	16	0	9	0	25	0	0	1	0	1	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Reaume Rd
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Reaume Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	11	0	6	0	17	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
16:15	17	0	6	0	23	3	0	4	0	7	0	0	0	0	0	0	0	0	0	0	0
16:30	5	0	6	0	11	3	0	4	0	7	1	0	0	0	1	0	0	0	0	0	0
16:45	12	0	15	0	27	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0
17:00	11	0	8	0	19	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
17:15	10	0	7	0	17	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0
17:30	14	0	12	0	26	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
17:45	14	0	13	0	27	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18:00	13	0	14	0	27	5	0	7	0	12	0	0	0	0	0	0	0	0	0	0	0
18:15	10	0	10	0	20	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
18:30	14	0	15	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	13	0	12	0	25	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	144	0	124	0	268	26	0	26	0	52	1	0	0	0	1	0	0	0	0	0	0
GRAND TOTAL	392	0	250	0	642	66	0	61	0	127	2	0	1	0	3	0	0	0	0	0	0

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Reaume Rd
Site ID: 1925700009
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	272	478	750
MT	54	80	134
HT	7	3	10
Bicycles	0	0	0
	333	**561**	**894**

Malden Rd

Bicycles	0	0	0
HT	1	6	0
MT	15	39	0
Cars	32	240	0
Totals	**48**	**285**	**0**

Peds: 0

Reaume Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	7	47	**54**
0	0	8	33	**41**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	80	58	138
MT	15	21	36
HT	0	2	2
Bicycles	0	0	0
	95	**81**	**176**

Totals	**33**	**507**	**0**
Cars	26	431	0
MT	6	73	0
HT	1	3	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	457	273	730
MT	79	47	126
HT	4	6	10
Bicycles	0	0	0
	540	**326**	**866**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Reaume Rd
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Reaume Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00		61	9	0	0	70	5	113		0	0	118				0			12		9	0	0	21	209
08:15		64	16	0	0	80	11	135		0	0	146				0			12		10	0	0	22	248
08:30		74	13	0	0	87	10	128		0	0	138				0			12		11	0	0	23	248
08:45		86	10	0	0	96	7	131		0	0	138				0			18		11	0	0	29	263
Grand Total		**285**	**48**	**0**	**0**	**333**	**33**	**507**		**0**	**0**	**540**				**0**	**0**		**54**		**41**	**0**	**0**	**95**	**968**
Approach %		85.6	14.4	0		-	6.1	93.9		0		-					-		56.8		43.2	0		-	
Totals %		29.4	5	0		34.4	3.4	52.4		0		55.8					0		5.6		4.2	0		9.8	
PHF		**0.83**	**0.75**	**0**		**0.87**	**0.75**	**0.94**		**0**		**0.92**					**0**		**0.75**		**0.93**	**0**		**0.82**	**0.92**
Cars		240	32	0		272	26	431		0		457					0		47		33	0		80	809
% Cars		84.2	66.7	0		81.7	78.8	85		0		84.6					0		87		80.5	0		84.2	83.6
Medium Trucks		39	15	0		54	6	73		0		79					0		7		8	0		15	148
% Medium Trucks		13.7	31.3	0		16.2	18.2	14.4		0		14.6					0		13		19.5	0		15.8	15.3
Heavy Trucks		6	1	0		7	1	3		0		4					0		0		0	0		0	11
% Heavy Trucks		2.1	2.1	0		2.1	3	0.6		0		0.7					0		0		0	0		0	1.1
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Reaume Rd
Site ID: 1925700009
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	474	425	899
MT	84	89	173
HT	1	2	3
Bicycles	0	0	0
	559	**516**	**1075**

Malden Rd

Bicycles	0	0	0
HT	0	1	0
MT	16	68	0
Cars	72	402	0
Totals	**88**	**471**	**0**

Peds: 1

Reaume Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	10	53	**63**
0	0	3	26	**29**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	79	99	178
MT	13	22	35
HT	0	2	2
Bicycles	0	0	0
	92	**123**	**215**

Totals	**35**	**453**	**0**
Cars	27	372	0
MT	6	79	0
HT	2	2	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	399	428	827
MT	85	71	156
HT	4	1	5
Bicycles	0	0	0
	488	**500**	**988**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Reaume Rd
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Reaume Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00		117	29	0	0	146	10	128		0	0	138				0			11		10	0	0	21	305
12:15		110	21	0	0	131	9	94		0	0	103				0			15		7	0	0	22	256
12:30		130	18	0	0	148	6	115		0	0	121				0			21		9	0	0	30	299
12:45		114	20	0	1	134	10	116		0	0	126				0			16		3	0	0	19	279
Grand Total		**471**	**88**	**0**	**1**	**559**	**35**	**453**		**0**	**0**	**488**				**0**	**0**		**63**		**29**	**0**	**0**	**92**	**1139**
Approach %		84.3	15.7	0		-	7.2	92.8		0		-					-		68.5		31.5	0		-	
Totals %		41.4	7.7	0		49.1	3.1	39.8		0		42.8					0		5.5		2.5	0		8.1	
PHF		**0.91**	**0.76**	**0**		**0.94**	**0.88**	**0.88**		**0**		**0.88**					**0**		**0.75**		**0.73**	**0**		**0.77**	**0.93**
Cars		402	72	0		474	27	372		0		399					0		53		26	0		79	952
% Cars		85.4	81.8	0		84.8	77.1	82.1		0		81.8					0		84.1		89.7	0		85.9	83.6
Medium Trucks		68	16	0		84	6	79		0		85					0		10		3	0		13	182
% Medium Trucks		14.4	18.2	0		15	17.1	17.4		0		17.4					0		15.9		10.3	0		14.1	16
Heavy Trucks		1	0	0		1	2	2		0		4					0		0		0	0		0	5
% Heavy Trucks		0.2	0	0		0.2	5.7	0.4		0		0.8					0		0		0	0		0	0.4
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					1	-					0	-				0	-						0	-	1
% Peds					100	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:15:00
To:	19:00:00	To:	18:15:00

Intersection: Malden Rd & Reaume Rd
Site ID: 1925700009
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	737	476	1213
MT	122	86	208
HT	2	4	6
Bicycles	0	0	0
	861	**566**	**1427**

Malden Rd

Bicycles	0	0	0
HT	1	1	0
MT	24	98	0
Cars	96	641	0
Totals	**121**	**740**	**0**

Reaume Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	9	51	**60**
0	0	11	46	**57**

Peds: 2

Peds: 0

Peds: 0

Peds: 0



West Approach

	Out	In	Total
Cars	97	140	237
MT	20	27	47
HT	0	3	3
Bicycles	0	0	0
	117	**170**	**287**

Totals	**49**	**506**	**0**
Cars	44	425	0
MT	3	77	0
HT	2	4	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	469	687	1156
MT	80	109	189
HT	6	1	7
Bicycles	0	0	0
	555	**797**	**1352**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Reaume Rd
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:15 - 18:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Reaume Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:15		186	27	0	0	213	12	132		0	0	144				0			12		9	0	0	21	378
17:30		194	33	0	1	227	15	116		0	0	131				0			15		14	0	0	29	387
17:45		188	36	0	1	224	12	135		0	0	147				0			15		13	0	0	28	399
18:00		172	25	0	0	197	10	123		0	0	133				0			18		21	0	0	39	369
Grand Total		**740**	**121**	**0**	**2**	**861**	**49**	**506**		**0**	**0**	**555**				**0**	**0**		**60**		**57**	**0**	**0**	**117**	**1533**
Approach %		85.9	14.1	0		-	8.8	91.2		0		-						-	51.3		48.7	0		-	
Totals %		48.3	7.9	0		56.2	3.2	33		0		36.2						0	3.9		3.7	0		7.6	
PHF		**0.95**	**0.84**	**0**		**0.95**	**0.82**	**0.94**		**0**		**0.94**						**0**	**0.83**		**0.68**	**0**		**0.75**	**0.96**
Cars		641	96	0		737	44	425		0		469						0	51		46	0		97	1303
% Cars		86.6	79.3	0		85.6	89.8	84		0		84.5						0	85		80.7	0		82.9	85
Medium Trucks		98	24	0		122	3	77		0		80						0	9		11	0		20	222
% Medium Trucks		13.2	19.8	0		14.2	6.1	15.2		0		14.4						0	15		19.3	0		17.1	14.5
Heavy Trucks		1	1	0		2	2	4		0		6						0	0		0	0		0	8
% Heavy Trucks		0.1	0.8	0		0.2	4.1	0.8		0		1.1						0	0		0	0		0	0.5
Bicycles		0	0	0		0	0	0		0		0						0	0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0						0	0		0	0		0	0
Peds					2	-					0	-					0	-					0	-	2
% Peds					100	-					0	-					0	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

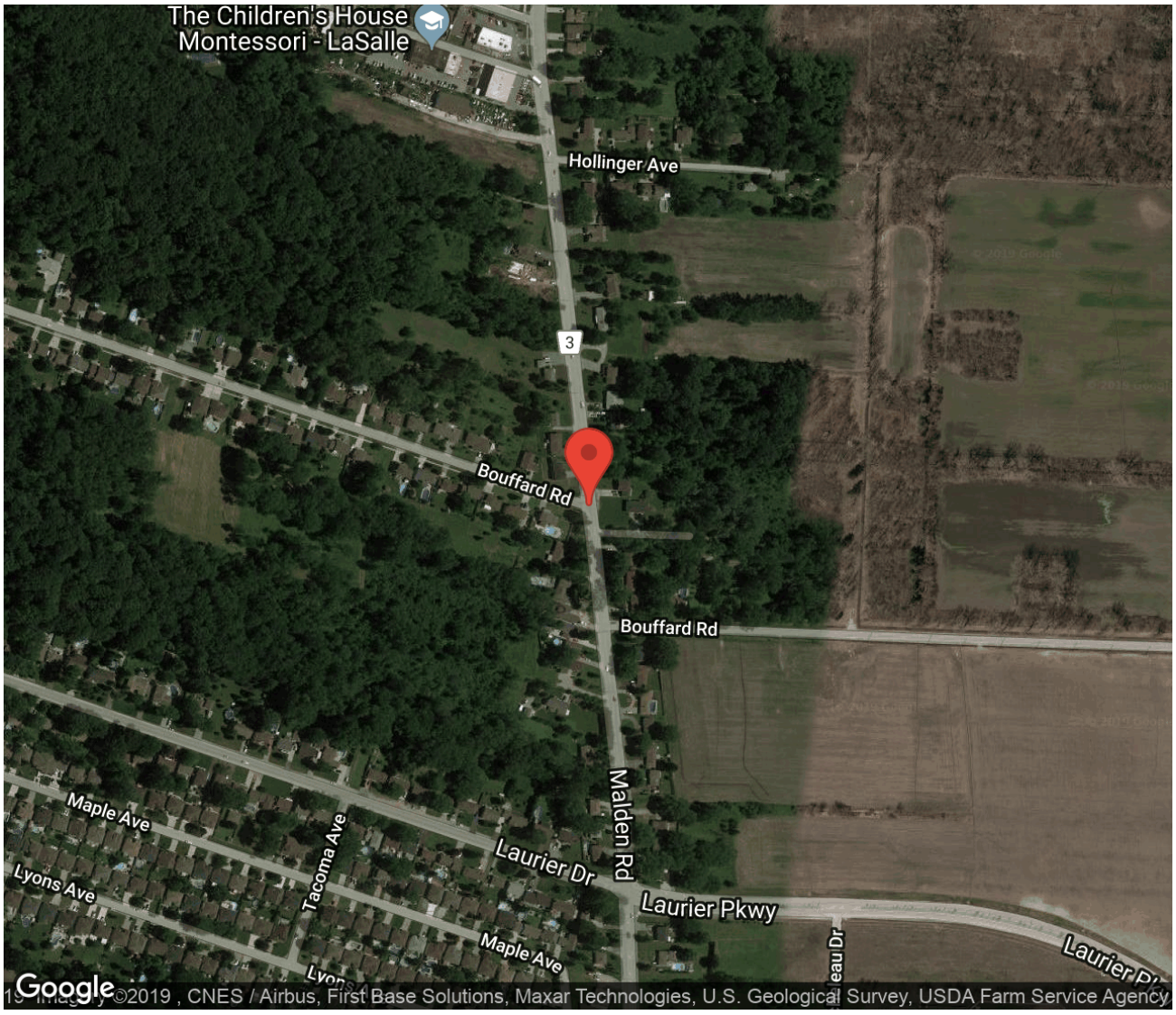
Intersection Count Report

Intersection:	Malden Rd & Bouffard Rd (west)
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700010
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	175	8	0	183	0	8	400	0	0	408	1
08:00 - 09:00	0	267	24	0	291	1	20	498	0	0	518	0
09:00 - 10:00	0	256	29	0	285	0	9	420	0	0	429	0
BREAK												
12:00 - 13:00	0	439	49	0	488	0	24	439	0	0	463	0
13:00 - 14:00	0	410	44	0	454	0	19	410	0	0	429	0
BREAK												
16:00 - 17:00	0	654	74	0	728	0	58	452	0	0	510	0
17:00 - 18:00	1	741	45	0	787	0	48	500	0	0	548	0
18:00 - 19:00	0	619	38	0	657	0	19	440	0	0	459	0
GRAND TOTAL	**1**	**3561**	**311**	**0**	**3873**	**1**	**205**	**3559**	**0**	**0**	**3764**	**1**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

Bouffard Rd - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	0	0	0	0	0	0	24	0	29	0	53	0
08:00 - 09:00	0	0	0	0	0	0	30	0	30	0	60	0
09:00 - 10:00	0	0	0	0	0	0	20	0	21	0	41	1
BREAK												
12:00 - 13:00	0	0	0	0	0	0	30	0	17	0	47	0
13:00 - 14:00	0	0	0	0	0	0	37	0	22	0	59	0
BREAK												
16:00 - 17:00	0	0	0	0	0	0	35	0	25	0	60	1
17:00 - 18:00	0	0	0	0	0	0	25	0	39	0	64	0
18:00 - 19:00	0	0	0	0	0	0	26	0	32	0	58	0
GRAND TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**227**	**0**	**215**	**0**	**442**	**2**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
07:00	0	28	2	0	30	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
07:15	0	39	1	0	40	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0
07:30	0	31	0	0	31	0	9	2	0	11	0	1	0	0	1	0	0	0	0	0	0
07:45	0	38	3	0	41	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
08:00	0	44	6	0	50	0	11	0	0	11	0	2	0	0	2	0	0	0	0	0	0
08:15	0	45	2	0	47	0	9	3	0	12	0	1	0	0	1	0	0	0	0	0	0
08:30	0	71	3	0	74	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
08:45	0	62	10	0	72	0	13	0	0	13	0	3	0	0	3	0	0	0	0	0	1
09:00	0	46	9	0	55	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0
09:15	0	50	6	0	56	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0
09:30	0	47	4	0	51	0	14	0	0	14	0	2	0	0	2	0	0	0	0	0	0
09:45	0	54	7	0	61	0	15	3	0	18	0	4	0	0	4	0	0	0	0	0	0
SUBTOTAL	0	555	53	0	608	0	129	8	0	137	0	14	0	0	14	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	106	10	0	116	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	0
12:15	0	81	11	0	92	0	18	2	0	20	0	0	0	0	0	0	0	0	0	0	0
12:30	0	104	13	0	117	0	19	1	0	20	0	1	0	0	1	0	0	0	0	0	0
12:45	0	89	7	0	96	0	13	3	0	16	0	0	0	0	0	0	0	0	0	0	0
13:00	0	88	11	0	99	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
13:15	0	80	9	0	89	0	12	1	0	13	0	3	0	0	3	0	0	0	0	0	0
13:30	0	92	11	0	103	0	17	1	0	18	0	2	0	0	2	0	0	0	0	0	0
13:45	0	75	9	0	84	0	25	2	0	27	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	0	715	81	0	796	0	126	12	0	138	0	8	0	0	8	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	108	20	0	128	0	21	2	0	23	0	0	0	0	0	0	0	0	0	0	0
16:15	0	123	12	0	135	0	23	5	0	28	0	1	0	0	1	0	0	0	0	0	0
16:30	0	162	15	0	177	0	33	8	0	41	0	0	0	0	0	0	0	0	0	0	0
16:45	0	155	8	0	163	0	28	4	0	32	0	0	0	0	0	0	0	0	0	0	0
17:00	0	146	11	0	157	1	22	4	0	27	0	1	0	0	1	0	0	0	0	0	0
17:15	0	158	8	0	166	0	27	1	0	28	0	0	0	0	0	0	0	0	0	0	0
17:30	0	165	12	0	177	0	32	0	0	32	0	0	0	0	0	0	0	0	0	0	0
17:45	0	167	9	0	176	0	22	0	0	22	0	1	0	0	1	0	0	0	0	0	0
18:00	0	157	5	0	162	0	30	1	0	31	0	0	0	0	0	0	0	0	0	0	0
18:15	0	142	7	0	149	0	19	1	0	20	0	0	0	0	0	0	0	0	0	0	0
18:30	0	127	9	0	136	0	24	0	0	24	0	1	0	0	1	0	0	0	0	0	0
18:45	0	102	14	0	116	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1712	130	0	1842	1	298	27	0	326	0	4	0	0	4	0	0	0	0	0	0
GRAND TOTAL	0	2982	264	0	3246	1	553	47	0	601	0	26	0	0	26	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	2	47	0	0	49	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
07:15	1	69	0	0	70	0	13	0	0	13	0	2	0	0	2	0	0	0	0	0	0
07:30	1	97	0	0	98	0	33	0	0	33	0	1	0	0	1	0	0	0	0	0	0
07:45	3	107	0	0	110	1	18	0	0	19	0	0	0	0	0	0	0	0	0	0	1
08:00	4	93	0	0	97	1	17	0	0	18	0	2	0	0	2	0	0	0	0	0	0
08:15	5	115	0	0	120	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
08:30	4	105	0	0	109	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
08:45	6	107	0	0	113	0	19	0	0	19	0	1	0	0	1	0	0	0	0	0	0
09:00	0	71	0	0	71	2	15	0	0	17	0	2	0	0	2	0	0	0	0	0	0
09:15	1	94	0	0	95	1	18	0	0	19	0	1	0	0	1	0	0	0	0	0	0
09:30	4	85	0	0	89	0	14	0	0	14	0	2	0	0	2	0	0	0	0	0	0
09:45	1	97	0	0	98	0	20	0	0	20	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	32	1087	0	0	1119	5	217	0	0	222	0	14	0	0	14	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	7	103	0	0	110	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
12:15	5	81	0	0	86	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0
12:30	5	89	0	0	94	2	17	0	0	19	0	2	0	0	2	0	0	0	0	0	0
12:45	5	90	0	0	95	0	25	0	0	25	0	1	0	0	1	0	0	0	0	0	0
13:00	7	100	0	0	107	0	15	0	0	15	0	3	0	0	3	0	0	0	0	0	0
13:15	5	80	0	0	85	0	16	0	0	16	0	2	0	0	2	0	0	0	0	0	0
13:30	3	83	0	0	86	1	12	0	0	13	0	0	0	0	0	0	0	0	0	0	0
13:45	3	85	0	0	88	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	40	711	0	0	751	3	130	0	0	133	0	8	0	0	8	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	9	92	0	0	101	2	21	0	0	23	0	0	0	0	0	0	0	0	0	0	0
16:15	10	97	0	0	107	4	14	0	0	18	0	1	0	0	1	0	0	0	0	0	0
16:30	16	87	0	0	103	3	13	0	0	16	0	1	0	0	1	0	0	0	0	0	0
16:45	12	111	0	0	123	2	15	0	0	17	0	0	0	0	0	0	0	0	0	0	0
17:00	9	94	0	0	103	8	21	0	0	29	0	1	0	0	1	0	0	0	0	0	0
17:15	9	111	0	0	120	2	20	0	0	22	0	2	0	0	2	0	0	0	0	0	0
17:30	10	102	0	0	112	3	19	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:45	6	106	0	0	112	1	21	0	0	22	0	2	0	0	2	0	0	0	0	0	0
18:00	6	107	0	0	113	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
18:15	7	101	0	0	108	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
18:30	2	74	0	0	76	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
18:45	4	94	0	0	98	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	100	1176	0	0	1276	25	205	0	0	230	0	11	0	0	11	0	0	0	0	0	0
GRAND TOTAL	172	2974	0	0	3146	33	552	0	0	585	0	33	0	0	33	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	5	0	7	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	5	0	5	0	10	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
07:30	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	9	0	12	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3	0	9	0	12	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
08:15	6	0	8	0	14	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:30	8	0	10	0	18	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	8	0	0	0	8	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
09:00	4	0	4	0	8	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
09:15	3	0	2	0	5	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1
09:30	5	0	2	0	7	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0
09:45	5	0	6	0	11	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	65	0	69	0	134	9	0	11	0	20	0	0	0	0	0	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	5	0	2	0	7	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
12:15	6	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:30	9	0	1	0	10	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
12:45	7	0	7	0	14	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
13:00	10	0	2	0	12	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
13:15	11	0	5	0	16	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
13:30	8	0	4	0	12	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
13:45	4	0	6	0	10	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	60	0	27	0	87	7	0	12	0	19	0	0	0	0	0	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (west)
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	7	0	2	0	9	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
16:15	9	0	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	7	0	10	0	17	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45	8	0	7	0	15	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
17:00	7	0	2	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	7	0	13	0	20	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
17:30	4	0	9	0	13	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
17:45	6	0	10	0	16	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
18:00	8	0	14	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	7	0	9	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	8	0	4	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	3	0	4	0	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	81	0	86	0	167	5	0	10	0	15	0	0	0	0	0	0	0	0	0	0	1
GRAND TOTAL	206	0	182	0	388	21	0	33	0	54	0	0	0	0	0	0	0	0	0	0	2

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Bouffard Rd (west)
Site ID: 1925700010
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	243	445	688
MT	42	78	120
HT	6	5	11
Bicycles	0	0	0
	291	**528**	**819**

Malden Rd

Bicycles	0	0	0
HT	0	6	0
MT	3	39	0
Cars	21	222	0
Totals	**24**	**267**	**0**

Peds: 1

Bouffard Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	5	25	**30**
0	0	3	27	**30**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	52	40	92
MT	8	4	12
HT	0	0	0
Bicycles	0	0	0
	60	**44**	**104**

Totals	**20**	**498**	**0**
Cars	19	420	0
MT	1	73	0
HT	0	5	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	439	249	688
MT	74	42	116
HT	5	6	11
Bicycles	0	0	0
	518	**297**	**815**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (west)
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Bouffard Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00		57	6	0	0	63	5	112		0	0	117				0			4		11	0	0	15	195
08:15		55	5	0	0	60	5	134		0	0	139				0			8		8	0	0	16	215
08:30		77	3	0	0	80	4	125		0	0	129				0			9		10	0	0	19	228
08:45		78	10	0	1	88	6	127		0	0	133				0			9		1	0	0	10	231
Grand Total		**267**	**24**	**0**	**1**	**291**	**20**	**498**		**0**	**0**	**518**				**0**	**0**		**30**		**30**	**0**	**0**	**60**	**869**
Approach %		91.8	8.2	0		-	3.9	96.1		0		-					-		50		50	0		-	
Totals %		30.7	2.8	0		33.5	2.3	57.3		0		59.6					0		3.5		3.5	0		6.9	
PHF		**0.86**	**0.6**	**0**		**0.83**	**0.83**	**0.93**		**0**		**0.93**					**0**		**0.83**		**0.68**	**0**		**0.79**	**0.94**
Cars		222	21	0		243	19	420		0		439					0		25		27	0		52	734
% Cars		83.1	87.5	0		83.5	95	84.3		0		84.7					0		83.3		90	0		86.7	84.5
Medium Trucks		39	3	0		42	1	73		0		74					0		5		3	0		8	124
% Medium Trucks		14.6	12.5	0		14.4	5	14.7		0		14.3					0		16.7		10	0		13.3	14.3
Heavy Trucks		6	0	0		6	0	5		0		5					0		0		0	0		0	11
% Heavy Trucks		2.2	0	0		2.1	0	1		0		1					0		0		0	0		0	1.3
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					1	-					0	-				0	-						0	-	1
% Peds					100	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Bouffard Rd (west)
Site ID: 1925700010
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	421	390	811
MT	66	76	142
HT	1	3	4
Bicycles	0	0	0
Totals	**488**	**469**	**957**

Malden Rd

Bicycles	0	0	0
HT	0	1	0
MT	8	58	0
Cars	41	380	0
Totals	**49**	**439**	**0**

Peds: 0

Bouffard Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	3	27	**30**
0	0	7	10	**17**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	37	63	100
MT	10	10	20
HT	0	0	0
Bicycles	0	0	0
Totals	**47**	**73**	**120**

Malden Rd

Totals	**24**	**439**	**0**
Cars	22	363	0
MT	2	73	0
HT	0	3	0
Bicycles	0	0	0

South Approach

	Out	In	Total
Cars	385	390	775
MT	75	65	140
HT	3	1	4
Bicycles	0	0	0
Totals	**463**	**456**	**919**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (west)
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Bouffard Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00		114	12	0	0	126	7	119		0	0	126				0			7		3	0	0	10	262
12:15		99	13	0	0	112	5	96		0	0	101				0			7		0	0	0	7	220
12:30		124	14	0	0	138	7	108		0	0	115				0			9		4	0	0	13	266
12:45		102	10	0	0	112	5	116		0	0	121				0			7		10	0	0	17	250
Grand Total		**439**	**49**	**0**	**0**	**488**	**24**	**439**		**0**	**0**	**463**				**0**	**0**		**30**		**17**	**0**	**0**	**47**	**998**
Approach %		90	10	0		-	5.2	94.8		0		-					-		63.8		36.2	0		-	
Totals %		44	4.9	0		48.9	2.4	44		0		46.4					0		3		1.7	0		4.7	
PHF		**0.89**	**0.88**	**0**		**0.88**	**0.86**	**0.92**		**0**		**0.92**					**0**		**0.83**		**0.43**	**0**		**0.69**	**0.94**
Cars		380	41	0		421	22	363		0		385					0		27		10	0		37	843
% Cars		86.6	83.7	0		86.3	91.7	82.7		0		83.2					0		90		58.8	0		78.7	84.5
Medium Trucks		58	8	0		66	2	73		0		75					0		3		7	0		10	151
% Medium Trucks		13.2	16.3	0		13.5	8.3	16.6		0		16.2					0		10		41.2	0		21.3	15.1
Heavy Trucks		1	0	0		1	0	3		0		3					0		0		0	0		0	4
% Heavy Trucks		0.2	0	0		0.2	0	0.7		0		0.6					0		0		0	0		0	0.4
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:15:00
To:	19:00:00	To:	18:15:00

Intersection: Malden Rd & Bouffard Rd (west)
Site ID: 1925700010
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	681	451	1132
MT	113	76	189
HT	1	6	7
Bicycles	0	0	0
	795	**533**	**1328**

Malden Rd

Bicycles	0	0	0
HT	0	1	0
MT	2	111	0
Cars	34	647	0
Totals	**36**	**759**	**0**

Peds: 0

Bouffard Rd

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	1	25	**26**
0	0	5	46	**51**

Peds: 0



Peds: 0

Peds: 0

West Approach

	Out	In	Total
Cars	71	65	136
MT	6	8	14
HT	0	0	0
Bicycles	0	0	0
	77	**73**	**150**

Totals	**37**	**507**	**0**
Cars	31	426	0
MT	6	75	0
HT	0	6	0
Bicycles	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	457	693	1150
MT	81	116	197
HT	6	1	7
Bicycles	0	0	0
	544	**810**	**1354**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (west)
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:15 - 18:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach						West Approach Bouffard Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:15		185	9	0	0	194	11	133		0	0	144				0			7		16	0	0	23	361
17:30		197	12	0	0	209	13	122		0	0	135				0			5		10	0	0	15	359
17:45		190	9	0	0	199	7	129		0	0	136				0			6		11	0	0	17	352
18:00		187	6	0	0	193	6	123		0	0	129				0			8		14	0	0	22	344
Grand Total		**759**	**36**	**0**	**0**	**795**	**37**	**507**		**0**	**0**	**544**				**0**	**0**		**26**		**51**	**0**	**0**	**77**	**1416**
Approach %		95.5	4.5	0		-	6.8	93.2		0		-					-		33.8		66.2	0		-	
Totals %		53.6	2.5	0		56.1	2.6	35.8		0		38.4					0		1.8		3.6	0		5.4	
PHF		**0.96**	**0.75**	**0**		**0.95**	**0.71**	**0.95**		**0**		**0.94**					**0**		**0.81**		**0.8**	**0**		**0.84**	**0.98**
Cars		647	34	0		681	31	426		0		457					0		25		46	0		71	1209
% Cars		85.2	94.4	0		85.7	83.8	84		0		84					0		96.2		90.2	0		92.2	85.4
Medium Trucks		111	2	0		113	6	75		0		81					0		1		5	0		6	200
% Medium Trucks		14.6	5.6	0		14.2	16.2	14.8		0		14.9					0		3.8		9.8	0		7.8	14.1
Heavy Trucks		1	0	0		1	0	6		0		6					0		0		0	0		0	7
% Heavy Trucks		0.1	0	0		0.1	0	1.2		0		1.1					0		0		0	0		0	0.5
Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
% Bicycles		0	0	0		0	0	0		0		0					0		0		0	0		0	0
Peds					0	-					0	-				0	-						0	-	0
% Peds					0	-					0	-				0	-						0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

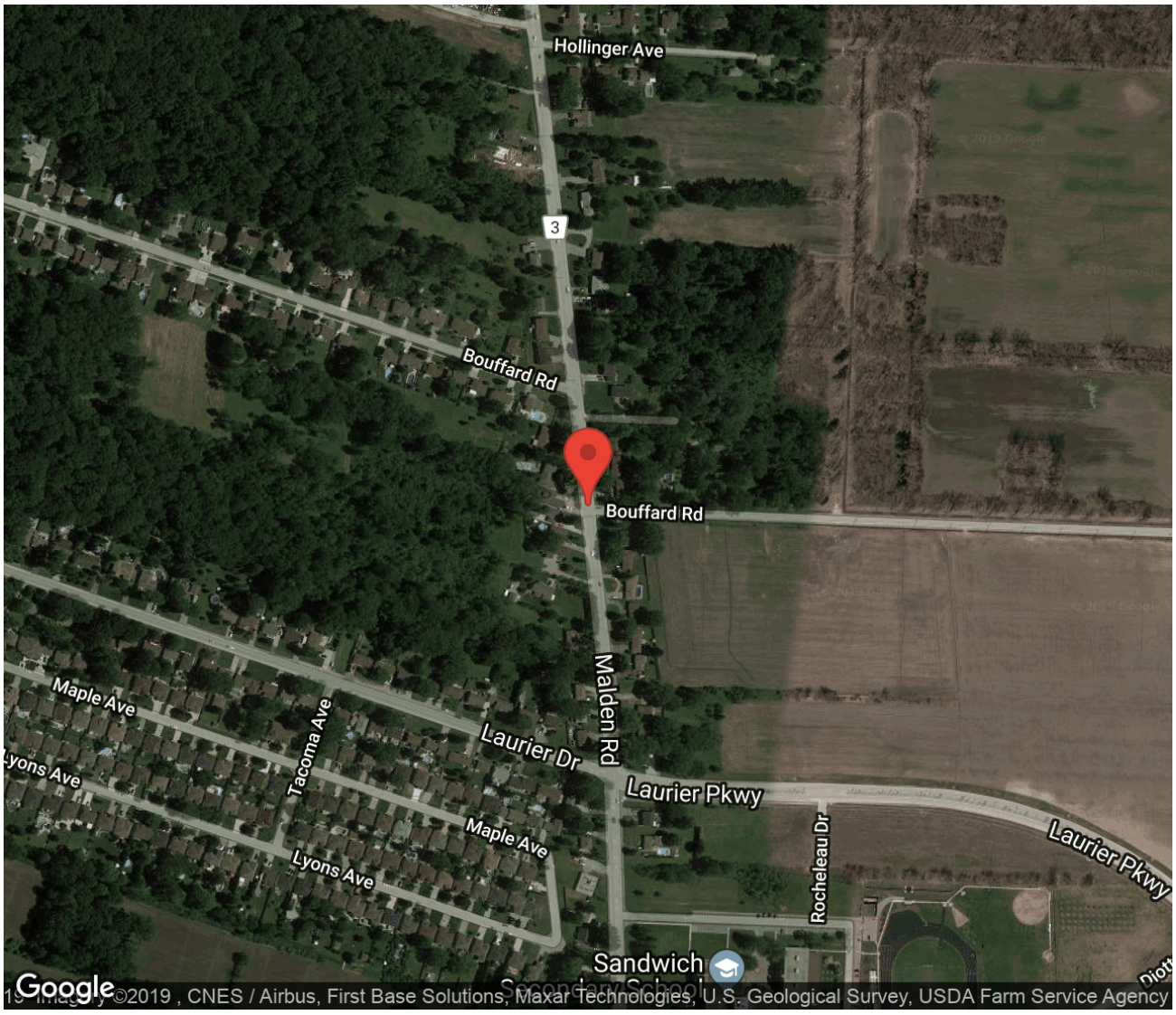
Intersection Count Report

Intersection:	Malden Rd & Bouffard Rd (east)
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700011
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	57	144	0	0	201	0	0	366	2	0	368	0
08:00 - 09:00	44	252	0	0	296	0	0	465	5	0	470	0
09:00 - 10:00	56	219	0	0	275	0	0	378	8	0	386	0
BREAK												
12:00 - 13:00	48	406	0	0	454	0	0	383	8	0	391	0
13:00 - 14:00	46	386	0	0	432	0	0	367	4	0	371	0
BREAK												
16:00 - 17:00	74	598	0	0	672	0	0	402	11	0	413	0
17:00 - 18:00	71	708	0	0	779	0	0	445	11	0	456	0
18:00 - 19:00	60	591	0	0	651	0	0	403	5	0	408	0
GRAND TOTAL	**456**	**3304**	**0**	**0**	**3760**	**0**	**0**	**3209**	**54**	**0**	**3263**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

Bouffard Rd - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	2	0	39	0	41	2	0	0	0	0	0	0
08:00 - 09:00	8	0	52	0	60	0	0	0	0	0	0	0
09:00 - 10:00	5	0	51	0	56	3	0	0	0	0	0	0
BREAK												
12:00 - 13:00	2	0	81	0	83	0	0	0	0	0	0	0
13:00 - 14:00	5	0	59	0	64	1	0	0	0	0	0	0
BREAK												
16:00 - 17:00	11	0	110	0	121	3	0	0	0	0	0	0
17:00 - 18:00	4	0	102	0	106	3	0	0	0	0	0	0
18:00 - 19:00	2	0	55	0	57	2	0	0	0	0	0	0
GRAND TOTAL	**39**	**0**	**549**	**0**	**588**	**14**	**0**	**0**	**0**	**0**	**0**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	9	26	0	0	35	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
07:15	12	31	0	0	43	2	9	0	0	11	0	1	0	0	1	0	0	0	0	0	0
07:30	11	24	0	0	35	0	9	0	0	9	0	1	0	0	1	0	0	0	0	0	0
07:45	17	31	0	0	48	5	9	0	0	14	0	0	0	0	0	0	0	0	0	0	0
08:00	12	41	0	0	53	2	11	0	0	13	0	2	0	0	2	0	0	0	0	0	0
08:15	5	47	0	0	52	1	8	0	0	9	0	1	0	0	1	0	0	0	0	0	0
08:30	12	69	0	0	81	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	0
08:45	6	56	0	0	62	3	11	0	0	14	0	3	0	0	3	0	0	0	0	0	0
09:00	8	42	0	0	50	5	5	0	0	10	0	0	0	0	0	0	0	0	0	0	0
09:15	5	47	0	0	52	4	13	0	0	17	0	0	0	0	0	0	0	0	0	0	0
09:30	9	40	0	0	49	5	13	0	0	18	1	1	0	0	2	0	0	0	0	0	0
09:45	16	42	0	0	58	3	12	0	0	15	0	4	0	0	4	0	0	0	0	0	0
SUBTOTAL	122	496	0	0	618	34	106	0	0	140	1	13	0	0	14	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	18	90	0	0	108	2	7	0	0	9	0	0	0	0	0	0	0	0	0	0	0
12:15	7	72	0	0	79	2	16	0	0	18	0	0	0	0	0	0	0	0	0	0	0
12:30	9	97	0	0	106	1	21	0	0	22	0	1	0	0	1	0	0	0	0	0	0
12:45	7	88	0	0	95	2	14	0	0	16	0	0	0	0	0	0	0	0	0	0	0
13:00	8	82	0	0	90	2	15	0	0	17	0	0	0	0	0	0	0	0	0	0	0
13:15	8	77	0	0	85	2	10	0	0	12	0	3	0	0	3	0	0	0	0	0	0
13:30	12	84	0	0	96	2	16	0	0	18	0	2	0	0	2	0	0	0	0	0	0
13:45	9	72	0	0	81	3	23	0	0	26	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	78	662	0	0	740	16	122	0	0	138	0	8	0	0	8	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	9	99	0	0	108	5	19	0	0	24	0	0	0	0	0	0	0	0	0	0	0
16:15	12	114	0	0	126	3	20	0	0	23	0	1	0	0	1	0	0	0	0	0	0
16:30	21	149	0	0	170	2	30	0	0	32	0	0	0	0	0	0	0	0	0	0	0
16:45	21	139	0	0	160	1	27	0	0	28	0	0	0	0	0	0	0	0	0	0	0
17:00	15	135	0	0	150	0	22	0	0	22	0	1	0	0	1	0	0	0	0	0	0
17:15	16	155	0	0	171	6	24	0	0	30	0	0	0	0	0	0	0	0	0	0	0
17:30	17	158	0	0	175	3	30	0	0	33	0	0	0	0	0	0	0	0	0	0	0
17:45	12	161	0	0	173	2	21	0	0	23	0	1	0	0	1	0	0	0	0	0	0
18:00	17	154	0	0	171	5	25	0	0	30	0	0	0	0	0	0	0	0	0	0	0
18:15	9	142	0	0	151	2	17	0	0	19	0	0	0	0	0	0	0	0	0	0	0
18:30	12	119	0	0	131	2	22	0	0	24	0	1	0	0	1	0	0	0	0	0	0
18:45	13	93	0	0	106	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	174	1618	0	0	1792	31	275	0	0	306	0	4	0	0	4	0	0	0	0	0	0
GRAND TOTAL	374	2776	0	0	3150	81	503	0	0	584	1	25	0	0	26	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
07:00	0	45	1	0	46	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
07:15	0	64	0	0	64	0	13	0	0	13	0	1	0	0	1	0	0	0	0	0	0
07:30	0	90	0	0	90	0	28	0	0	28	0	1	0	0	1	0	0	0	0	0	0
07:45	0	94	0	0	94	0	18	1	0	19	0	0	0	0	0	0	0	0	0	0	0
08:00	0	85	0	0	85	0	13	0	0	13	0	2	0	0	2	0	0	0	0	0	0
08:15	0	108	0	0	108	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
08:30	0	104	3	0	107	0	16	0	0	16	0	0	1	0	1	0	0	0	0	0	0
08:45	0	104	1	0	105	0	16	0	0	16	0	1	0	0	1	0	0	0	0	0	0
09:00	0	65	2	0	67	0	12	0	0	12	0	1	1	0	2	0	0	0	0	0	0
09:15	0	87	0	0	87	0	14	1	0	15	0	1	0	0	1	0	0	0	0	0	0
09:30	0	78	1	0	79	0	11	0	0	11	0	2	0	0	2	0	0	0	0	0	0
09:45	0	89	1	0	90	0	17	2	0	19	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	1013	9	0	1022	0	185	4	0	189	0	11	2	0	13	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	98	1	0	99	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
12:15	0	72	1	0	73	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
12:30	0	77	0	0	77	0	13	1	0	14	0	2	0	0	2	0	0	0	0	0	0
12:45	0	77	4	0	81	0	19	1	0	20	0	1	0	0	1	0	0	0	0	0	0
13:00	0	93	0	0	93	0	14	0	0	14	0	2	0	0	2	0	0	0	0	0	0
13:15	0	69	1	0	70	0	13	1	0	14	0	2	0	0	2	0	0	0	0	0	0
13:30	0	75	1	0	76	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
13:45	0	78	1	0	79	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	639	9	0	648	0	104	3	0	107	0	7	0	0	7	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	84	2	0	86	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0
16:15	0	89	1	0	90	0	14	1	0	15	0	1	0	0	1	0	0	0	0	0	0
16:30	0	75	3	0	78	0	12	0	0	12	0	1	0	0	1	0	0	0	0	0	0
16:45	0	101	4	0	105	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0
17:00	0	74	2	0	76	0	22	1	0	23	0	1	0	0	1	0	0	0	0	0	0
17:15	0	100	2	0	102	0	21	0	0	21	0	2	0	0	2	0	0	0	0	0	0
17:30	0	92	3	0	95	0	18	0	0	18	0	1	0	0	1	0	0	0	0	0	0
17:45	0	93	2	0	95	0	19	1	0	20	0	2	0	0	2	0	0	0	0	0	0
18:00	0	100	1	0	101	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
18:15	0	95	0	0	95	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0
18:30	0	65	1	0	66	0	12	0	0	12	0	1	0	0	1	0	0	0	0	0	0
18:45	0	86	3	0	89	0	15	0	0	15	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	1054	24	0	1078	0	185	3	0	188	0	11	0	0	11	0	0	0	0	0	0
GRAND TOTAL	0	2706	42	0	2748	0	474	10	0	484	0	29	2	0	31	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	4	0	4	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	1
07:15	0	0	6	0	6	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
07:30	1	0	8	0	9	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	13	0	13	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00	0	0	12	0	12	1	0	5	0	6	0	0	0	0	0	0	0	0	0	0	0
08:15	1	0	11	0	12	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	1	0	5	0	6	5	0	3	0	8	0	0	1	0	1	0	0	0	0	0	0
08:45	0	0	9	0	9	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
09:00	2	0	6	0	8	0	0	5	0	5	0	0	1	0	1	0	0	0	0	0	0
09:15	0	0	8	0	8	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1
09:30	2	0	11	0	13	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1
09:45	1	0	9	0	10	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	8	0	102	0	110	6	0	37	0	43	1	0	3	0	4	0	0	0	0	0	5

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	0	0	12	0	12	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0
12:15	1	0	15	0	16	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	17	0	17	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0
12:45	1	0	18	0	19	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0
13:00	1	0	11	0	12	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	1
13:15	1	0	16	0	17	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
13:30	1	0	11	0	12	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
13:45	1	0	10	0	11	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	6	0	110	0	116	1	0	29	0	30	0	0	1	0	1	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Bouffard Rd (east)
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Bouffard Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	0	0	18	0	18	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	0
16:15	3	0	18	0	21	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	1
16:30	2	0	30	0	32	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0
16:45	3	0	21	0	24	1	0	8	0	9	0	0	0	0	0	0	0	0	0	0	2
17:00	0	0	28	0	28	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0
17:15	1	0	20	0	21	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	20	0	21	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	3
17:45	1	0	18	0	19	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
18:00	1	0	13	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	12	0	12	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	11	0	11	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	12	0	12	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	12	0	221	0	233	5	0	46	0	51	0	0	0	0	0	0	0	0	0	0	8
GRAND TOTAL	26	0	433	0	459	12	0	112	0	124	1	0	4	0	5	0	0	0	0	0	14

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Bouffard Rd (east)
Site ID: 1925700011
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	248	438	686
MT	42	74	116
HT	6	5	11
Bicycles	0	0	0
	296	**517**	**813**

Malden Rd

Bicycles	0	0	0
HT	6	0	0
MT	33	9	0
Cars	213	35	0
Totals	**252**	**44**	**0**

Peds: 0

Peds: 0

Peds: 0

Totals	**465**	**5**	**0**
Cars	401	4	0
MT	60	0	0
HT	4	1	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	39	39	78
MT	20	9	29
HT	1	1	2
Bicycles	0	0	0
	60	**49**	**109**

Bouffard Rd

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	52	37	14	1	0
	8	2	6	0	0

South Approach

	Out	In	Total
Cars	405	215	620
MT	60	39	99
HT	5	6	11
Bicycles	0	0	0
	470	**260**	**730**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (east)
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Bouffard Rd						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	14	54		0	0	68		100	0	0	0	100	1		17	0	0	18					0		186
08:15	6	56		0	0	62		124	0	0	0	124	1		14	0	0	15					0		201
08:30	15	72		0	0	87		120	4	0	0	124	6		9	0	0	15					0		226
08:45	9	70		0	0	79		121	1	0	0	122	0		12	0	0	12					0		213
Grand Total	**44**	**252**		**0**	**0**	**296**		**465**	**5**	**0**	**0**	**470**	**8**		**52**	**0**	**0**	**60**					**0**	**0**	**826**
Approach %	14.9	85.1		0		-		98.9	1.1	0		-	13.3		86.7	0		-						-	
Totals %	5.3	30.5		0		35.8		56.3	0.6	0		56.9	1		6.3	0		7.3						0	
PHF	**0.73**	**0.88**		**0**		**0.85**		**0.94**	**0.31**	**0**		**0.95**	**0.33**		**0.76**	**0**		**0.83**						**0**	**0.91**
Cars	35	213		0		248		401	4	0		405	2		37	0		39						0	692
% Cars	79.5	84.5		0		83.8		86.2	80	0		86.2	25		71.2	0		65						0	83.8
Medium Trucks	9	33		0		42		60	0	0		60	6		14	0		20						0	122
% Medium Trucks	20.5	13.1		0		14.2		12.9	0	0		12.8	75		26.9	0		33.3						0	14.8
Heavy Trucks	0	6		0		6		4	1	0		5	0		1	0		1						0	12
% Heavy Trucks	0	2.4		0		2		0.9	20	0		1.1	0		1.9	0		1.7						0	1.5
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Bouffard Rd (east)
Site ID: 1925700011
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	388	386	774
MT	65	75	140
HT	1	3	4
Bicycles	0	0	0
	454	**464**	**918**

Malden Rd

Bicycles	0	0	0
HT	1	0	0
MT	58	7	0
Cars	347	41	0
Totals	**406**	**48**	**0**

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Totals			
Cars	324	6	0
MT	56	2	0
HT	3	0	0
Bicycles	0	0	0
Totals	**383**	**8**	**0**

Malden Rd

East Approach

	Out	In	Total
Cars	64	47	111
MT	19	9	28
HT	0	0	0
Bicycles	0	0	0
	83	**56**	**139**

Bouffard Rd

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
81	62	19	0	0
2	2	0	0	0

South Approach

	Out	In	Total
Cars	330	349	679
MT	58	58	116
HT	3	1	4
Bicycles	0	0	0
	391	**408**	**799**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (east)
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Bouffard Rd						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	20	97		0	0	117		110	1	0	0	111	0		16	0	0	16					0		244
12:15	9	88		0	0	97		84	1	0	0	85	1		18	0	0	19					0		201
12:30	10	119		0	0	129		92	1	0	0	93	0		23	0	0	23					0		245
12:45	9	102		0	0	111		97	5	0	0	102	1		24	0	0	25					0		238
Grand Total	**48**	**406**		**0**	**0**	**454**		**383**	**8**	**0**	**0**	**391**	**2**		**81**	**0**	**0**	**83**					**0**	**0**	**928**
Approach %	10.6	89.4		0		-		98	2	0		-	2.4		97.6	0		-						-	
Totals %	5.2	43.8		0		48.9		41.3	0.9	0		42.1	0.2		8.7	0		8.9						0	
PHF	**0.6**	**0.85**		**0**		**0.88**		**0.87**	**0.4**	**0**		**0.88**	**0.5**		**0.84**	**0**		**0.83**						**0**	**0.95**
Cars	41	347		0		388		324	6	0		330	2		62	0		64						0	782
% Cars	85.4	85.5		0		85.5		84.6	75	0		84.4	100		76.5	0		77.1						0	84.3
Medium Trucks	7	58		0		65		56	2	0		58	0		19	0		19						0	142
% Medium Trucks	14.6	14.3		0		14.3		14.6	25	0		14.8	0		23.5	0		22.9						0	15.3
Heavy Trucks	0	1		0		1		3	0	0		3	0		0	0		0						0	4
% Heavy Trucks	0	0.2		0		0.2		0.8	0	0		0.8	0		0	0		0						0	0.4
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:15:00
To:	19:00:00	To:	18:15:00

Intersection: Malden Rd & Bouffard Rd (east)
Site ID: 1925700011
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	690	456	1146
MT	116	82	198
HT	1	6	7
Bicycles	0	0	0
	807	**544**	**1351**

Malden Rd

Bicycles	0	0	0
HT	1	0	0
MT	100	16	0
Cars	628	62	0
Totals	**729**	**78**	**0**

Peds: 0

Peds: 0

Peds: 3

Peds: 0

Totals	**464**	**9**	**0**
Cars	385	8	0
MT	73	1	0
HT	6	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	75	70	145
MT	10	17	27
HT	0	0	0
Bicycles	0	0	0
	85	**87**	**172**

Bouffard Rd

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
80	71	9	0	0
5	4	1	0	0

South Approach

	Out	In	Total
Cars	393	632	1025
MT	74	101	175
HT	6	1	7
Bicycles	0	0	0
	473	**734**	**1207**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Bouffard Rd (east)
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:15 - 18:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Bouffard Rd						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:15	22	179		0	0	201		123	2	0	0	125	1		22	0	0	23					0		349
17:30	20	188		0	0	208		111	3	0	0	114	1		24	0	3	25					0		347
17:45	14	183		0	0	197		114	3	0	0	117	2		21	0	0	23					0		337
18:00	22	179		0	0	201		116	1	0	0	117	1		13	0	0	14					0		332
Grand Total	**78**	**729**		**0**	**0**	**807**		**464**	**9**	**0**	**0**	**473**	**5**		**80**	**0**	**3**	**85**					**0**	**0**	**1365**
Approach %	9.7	90.3		0		-		98.1	1.9	0		-	5.9		94.1	0		-						-	
Totals %	5.7	53.4		0		59.1		34	0.7	0		34.7	0.4		5.9	0		6.2						0	
PHF	**0.89**	**0.97**		**0**		**0.97**		**0.94**	**0.75**	**0**		**0.95**	**0.63**		**0.83**	**0**		**0.85**						**0**	**0.98**
Cars	62	628		0		690		385	8	0		393	4		71	0		75						0	1158
% Cars	79.5	86.1		0		85.5		83	88.9	0		83.1	80		88.8	0		88.2						0	84.8
Medium Trucks	16	100		0		116		73	1	0		74	1		9	0		10						0	200
% Medium Trucks	20.5	13.7		0		14.4		15.7	11.1	0		15.6	20		11.3	0		11.8						0	14.7
Heavy Trucks	0	1		0		1		6	0	0		6	0		0	0		0						0	7
% Heavy Trucks	0	0.1		0		0.1		1.3	0	0		1.3	0		0	0		0						0	0.5
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					3	-					0	-	3
% Peds					0	-					0	-					100	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

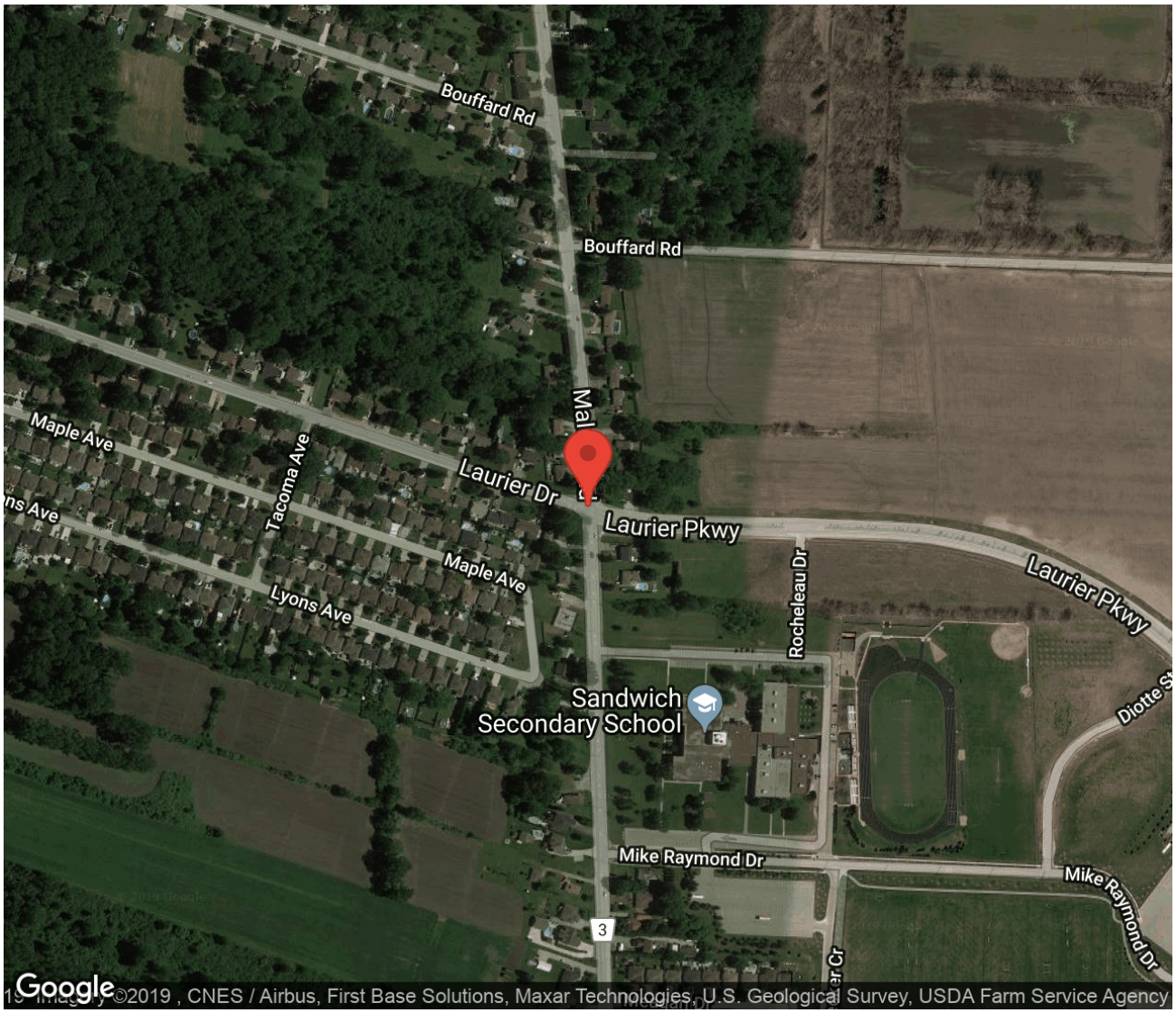
Intersection Count Report

Intersection:	Malden Rd & Laurier Dr-Gilroy St
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700012
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	29	91	25	0	145	1	16	253	19	0	288	3
08:00 - 09:00	38	142	80	0	260	0	29	327	21	0	377	3
09:00 - 10:00	44	111	69	0	224	0	18	233	15	0	266	3
BREAK												
12:00 - 13:00	31	227	152	0	410	0	19	228	25	0	272	0
13:00 - 14:00	57	204	130	0	391	0	16	201	19	0	236	0
BREAK												
16:00 - 17:00	41	358	207	0	606	0	35	236	12	0	283	3
17:00 - 18:00	80	449	182	0	711	0	24	258	21	0	303	2
18:00 - 19:00	54	390	147	0	591	0	34	254	18	0	306	2
GRAND TOTAL	**374**	**1972**	**992**	**0**	**3338**	**1**	**191**	**1990**	**150**	**0**	**2331**	**16**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

Gilroy St - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	7	33	27	0	67	1	86	112	18	0	216	0
08:00 - 09:00	8	67	24	0	99	0	118	125	43	0	286	0
09:00 - 10:00	9	61	36	0	106	2	117	93	21	0	231	0
BREAK												
12:00 - 13:00	19	95	47	0	161	0	113	85	20	0	218	0
13:00 - 14:00	18	87	45	0	150	1	124	78	24	0	226	1
BREAK												
16:00 - 17:00	42	144	58	0	244	2	116	105	31	0	252	5
17:00 - 18:00	45	145	56	0	246	3	142	110	81	0	333	2
18:00 - 19:00	19	95	40	0	154	0	114	88	86	0	288	0
GRAND TOTAL	**167**	**727**	**333**	**0**	**1227**	**9**	**930**	**796**	**324**	**0**	**2050**	**8**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	6	19	1	0	26	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	1
07:15	2	19	9	0	30	2	7	0	0	9	0	0	1	0	1	0	0	0	0	0	0
07:30	8	13	4	0	25	3	5	1	0	9	1	0	0	0	1	0	0	0	0	0	0
07:45	6	20	5	0	31	1	4	4	0	9	0	0	0	0	0	0	0	0	0	0	0
08:00	5	27	9	0	41	2	7	3	0	12	1	1	0	0	2	0	0	0	0	0	0
08:15	6	30	12	0	48	0	7	1	0	8	0	1	0	0	1	0	0	0	0	0	0
08:30	11	31	28	0	70	1	2	5	0	8	0	0	0	0	0	0	0	0	0	0	0
08:45	8	33	15	0	56	3	3	5	0	11	1	0	2	0	3	0	0	0	0	0	0
09:00	9	24	11	0	44	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	0
09:15	10	21	16	0	47	2	4	7	0	13	0	0	0	0	0	0	0	0	0	0	0
09:30	6	25	11	0	42	4	7	2	0	13	1	0	0	0	1	0	0	0	0	0	0
09:45	8	20	15	0	43	0	6	6	0	12	2	2	0	0	4	0	0	0	0	0	0
SUBTOTAL	85	282	136	0	503	20	57	35	0	112	6	5	3	0	14	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	6	47	37	0	90	0	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0
12:15	4	41	30	0	75	3	8	5	0	16	0	0	0	0	0	0	0	0	0	0	0
12:30	5	54	38	0	97	1	13	7	0	21	1	0	0	0	1	0	0	0	0	0	0
12:45	7	53	29	0	89	4	7	3	0	14	0	0	0	0	0	0	0	0	0	0	0
13:00	7	41	34	0	82	2	9	4	0	15	0	0	0	0	0	0	0	0	0	0	0
13:15	9	45	24	0	78	2	5	4	0	11	1	2	0	0	3	0	0	0	0	0	0
13:30	16	44	25	0	85	2	8	6	0	16	1	1	0	0	2	0	0	0	0	0	0
13:45	11	37	26	0	74	5	12	6	0	23	1	0	1	0	2	0	0	0	0	0	0
SUBTOTAL	65	362	243	0	670	19	66	38	0	123	4	3	1	0	8	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	8	50	39	0	97	3	11	6	0	20	0	0	0	0	0	0	0	0	0	0	0
16:15	8	72	37	0	117	2	13	6	0	21	1	0	0	0	1	0	0	0	0	0	0
16:30	6	88	56	0	150	2	21	7	0	30	0	0	0	0	0	0	0	0	0	0	0
16:45	10	83	49	0	142	1	20	7	0	28	0	0	0	0	0	0	0	0	0	0	0
17:00	9	91	36	0	136	1	11	10	0	22	1	0	0	0	1	0	0	0	0	0	0
17:15	19	88	49	0	156	3	17	4	0	24	0	0	0	0	0	0	0	0	0	0	0
17:30	20	107	32	0	159	2	22	6	0	30	0	0	0	0	0	0	0	0	0	0	0
17:45	24	95	41	0	160	0	18	4	0	22	1	0	0	0	1	0	0	0	0	0	0
18:00	20	107	28	0	155	3	13	9	0	25	0	0	0	0	0	0	0	0	0	0	0
18:15	10	95	37	0	142	3	12	2	0	17	0	0	0	0	0	0	0	0	0	0	0
18:30	8	79	30	0	117	1	14	8	0	23	1	0	0	0	1	0	0	0	0	0	0
18:45	8	58	27	0	93	0	12	6	0	18	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	150	1013	461	0	1624	21	184	75	0	280	4	0	0	0	4	0	0	0	0	0	0
GRAND TOTAL	300	1657	840	0	2797	60	307	148	0	515	14	8	4	0	26	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
07:00	2	28	1	0	31	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
07:15	4	50	2	0	56	4	6	0	0	10	0	1	0	0	1	0	0	0	0	0	1
07:30	2	63	8	0	73	4	15	5	0	24	0	1	0	0	1	0	0	0	0	0	1
07:45	0	66	3	0	69	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	1
08:00	3	58	5	0	66	2	8	1	0	11	0	2	0	0	2	0	0	0	0	0	1
08:15	3	83	2	0	88	0	11	1	0	12	0	1	1	0	2	0	0	0	0	0	0
08:30	6	75	6	0	87	2	8	0	0	10	0	0	0	0	0	0	0	0	0	0	1
08:45	10	68	4	0	82	3	12	1	0	16	0	1	0	0	1	0	0	0	0	0	1
09:00	5	36	4	0	45	1	9	0	0	10	0	2	0	0	2	0	0	0	0	0	2
09:15	5	59	5	0	69	0	8	0	0	8	0	1	0	0	1	0	0	0	0	0	0
09:30	3	54	2	0	59	0	7	0	0	7	0	2	0	0	2	0	0	0	0	0	0
09:45	3	46	2	0	51	1	9	2	0	12	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	46	686	44	0	776	17	116	10	0	143	0	11	1	0	12	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	6	64	5	0	75	0	6	0	0	6	0	0	2	0	2	0	0	0	0	0	0
12:15	3	43	1	0	47	0	6	2	0	8	0	0	1	0	1	0	0	0	0	0	0
12:30	3	38	2	0	43	1	10	2	0	13	0	0	1	0	1	0	0	0	0	0	0
12:45	5	47	9	0	61	1	13	0	0	14	0	1	0	0	1	0	0	0	0	0	0
13:00	4	54	5	0	63	0	7	1	0	8	0	2	0	0	2	0	0	0	0	0	0
13:15	6	39	3	0	48	0	9	2	0	11	0	1	3	0	4	0	0	0	0	0	0
13:30	1	39	1	0	41	1	7	2	0	10	0	0	0	0	0	0	0	0	0	0	0
13:45	4	38	2	0	44	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	32	362	28	0	422	3	63	9	0	75	0	4	7	0	11	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
16:00	9	48	2	0	59	1	9	0	0	10	0	0	2	0	2	0	0	0	0	0	1
16:15	5	45	2	0	52	1	12	1	0	14	0	1	0	0	1	0	0	0	0	0	0
16:30	10	42	1	0	53	1	8	2	0	11	0	1	0	0	1	0	0	0	0	0	0
16:45	8	65	2	0	75	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	2
17:00	4	42	3	0	49	0	10	0	0	10	0	1	2	0	3	0	0	0	0	0	0
17:15	5	54	0	0	59	2	12	0	0	14	0	1	0	0	1	0	0	0	0	0	0
17:30	6	53	4	0	63	1	9	3	0	13	0	1	0	0	1	0	0	0	0	0	0
17:45	6	57	7	0	70	0	16	1	0	17	0	2	1	0	3	0	0	0	0	0	2
18:00	6	67	5	0	78	2	11	2	0	15	0	1	0	0	1	0	0	0	0	0	0
18:15	6	57	2	0	65	4	5	1	0	10	0	0	0	0	0	0	0	0	0	0	0
18:30	3	38	4	0	45	3	8	1	0	12	0	1	0	0	1	0	0	0	0	0	2
18:45	9	55	3	0	67	1	10	0	0	11	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	77	623	35	0	735	16	115	11	0	142	0	10	5	0	15	0	0	0	0	0	7
GRAND TOTAL	155	1671	107	0	1933	36	294	30	0	360	0	25	13	0	38	0	0	0	0	0	16

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Gilroy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	2	2	0	4	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	2	5	3	0	10	2	5	4	0	11	0	1	0	0	1	0	0	0	0	0	1
07:30	0	6	6	0	12	0	3	3	0	6	1	0	0	0	1	0	0	0	0	0	0
07:45	2	8	6	0	16	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	0
08:00	1	13	5	0	19	0	4	0	0	4	1	2	0	0	3	0	0	0	0	0	0
08:15	0	9	3	0	12	0	3	4	0	7	0	2	0	0	2	0	0	0	0	0	0
08:30	3	7	3	0	13	0	8	2	0	10	0	0	1	0	1	0	0	0	0	0	0
08:45	2	16	5	0	23	0	3	1	0	4	1	0	0	0	1	0	0	0	0	0	0
09:00	1	11	8	0	20	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0
09:15	4	19	4	0	27	0	5	3	0	8	0	0	0	0	0	0	0	0	0	0	0
09:30	0	6	4	0	10	0	3	1	0	4	0	1	0	0	1	0	0	0	0	0	1
09:45	2	10	8	0	20	0	3	5	0	8	2	0	1	0	3	0	0	0	0	0	1
SUBTOTAL	17	112	57	0	186	2	42	28	0	72	5	7	2	0	14	0	0	0	0	0	3

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Gilroy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	3	14	9	0	26	1	5	1	0	7	0	0	0	0	0	0	0	0	0	0	0
12:15	4	21	10	0	35	0	5	2	0	7	1	0	0	0	1	0	0	0	0	0	0
12:30	5	24	12	0	41	1	3	1	0	5	0	0	2	0	2	0	0	0	0	0	0
12:45	3	13	7	0	23	0	10	3	0	13	1	0	0	0	1	0	0	0	0	0	0
13:00	2	20	7	0	29	1	1	3	0	5	1	1	0	0	2	0	0	0	0	0	0
13:15	3	19	4	0	26	0	7	1	0	8	0	1	1	0	2	0	0	0	0	0	1
13:30	5	10	10	0	25	1	5	1	0	7	0	0	0	0	0	0	0	0	0	0	0
13:45	2	20	14	0	36	1	3	4	0	8	2	0	0	0	2	0	0	0	0	0	0
SUBTOTAL	27	141	73	0	241	5	39	16	0	60	5	2	3	0	10	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Gilroy St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	7	25	14	0	46	0	5	2	0	7	0	0	0	0	0	0	0	0	0	0	0
16:15	7	33	14	0	54	3	5	1	0	9	0	1	0	0	1	0	0	0	0	0	0
16:30	7	28	12	0	47	4	4	2	0	10	2	1	0	0	3	0	0	0	0	0	0
16:45	6	31	10	0	47	6	11	3	0	20	0	0	0	0	0	0	0	0	0	0	2
17:00	3	40	8	0	51	4	10	3	0	17	0	0	0	0	0	0	0	0	0	0	0
17:15	12	32	15	0	59	4	8	4	0	16	0	0	1	0	1	0	0	0	0	0	0
17:30	8	28	11	0	47	0	4	4	0	8	2	0	0	0	2	0	0	0	0	0	1
17:45	12	17	10	0	39	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	2
18:00	4	23	8	0	35	0	5	2	0	7	0	0	0	0	0	0	0	0	0	0	0
18:15	0	26	11	0	37	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0	0
18:30	8	16	8	0	32	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0	0
18:45	5	18	9	0	32	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	79	317	130	0	526	23	65	23	0	111	4	2	1	0	7	0	0	0	0	0	5
GRAND TOTAL	123	570	260	0	953	30	146	67	0	243	14	11	6	0	31	0	0	0	0	0	9

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Laurier Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	15	20	2	0	37	4	5	0	0	9	0	2	0	0	2	0	0	0	0	0	0
07:15	11	15	6	0	32	3	6	0	0	9	0	0	0	0	0	0	0	0	0	0	0
07:30	20	26	5	0	51	10	9	0	0	19	0	0	0	0	0	0	0	0	0	0	0
07:45	22	26	5	0	53	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	0
08:00	22	29	7	0	58	5	3	2	0	10	0	0	0	0	0	0	0	0	0	0	0
08:15	22	21	11	0	54	0	10	1	0	11	0	0	0	0	0	0	0	0	0	0	0
08:30	28	24	9	0	61	6	5	0	0	11	0	3	0	0	3	0	0	0	0	0	0
08:45	32	20	9	0	61	3	9	3	0	15	0	1	1	0	2	0	0	0	0	0	0
09:00	23	15	4	0	42	1	3	1	0	5	0	2	0	0	2	0	0	0	0	0	0
09:15	24	16	3	0	43	4	5	0	0	9	0	1	0	0	1	0	0	0	0	0	0
09:30	21	16	6	0	43	3	3	0	0	6	0	2	0	0	2	0	0	0	0	0	0
09:45	36	26	5	0	67	5	4	2	0	11	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	276	254	72	0	602	45	64	9	0	118	0	12	1	0	13	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Laurier Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
12:00	26	17	3	0	46	5	1	2	0	8	0	0	0	0	0	0	0	0	0	0	0
12:15	20	20	6	0	46	4	2	0	0	6	0	1	0	0	1	0	0	0	0	0	0
12:30	27	18	3	0	48	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0
12:45	24	22	6	0	52	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0
13:00	32	16	3	0	51	4	7	3	0	14	0	1	0	0	1	0	0	0	0	0	1
13:15	27	10	3	0	40	4	1	2	0	7	0	0	0	0	0	0	0	0	0	0	0
13:30	27	17	3	0	47	2	4	2	0	8	0	1	0	0	1	0	0	0	0	0	0
13:45	26	14	6	0	46	2	6	2	0	10	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	209	134	33	0	376	28	25	11	0	64	0	4	0	0	4	0	0	0	0	0	1

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Laurier Dr-Gilroy St
Municipality: LaSalle
Count Date: Jul 31, 2019

West Approach - Laurier Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	23	31	5	0	59	5	2	2	0	9	0	1	0	0	1	0	0	0	0	0	2
16:15	31	18	9	0	58	2	5	0	0	7	0	0	0	0	0	0	0	0	0	0	1
16:30	24	18	9	0	51	2	6	0	0	8	0	1	0	0	1	0	0	0	0	0	0
16:45	28	18	5	0	51	1	4	1	0	6	0	1	0	0	1	0	0	0	0	0	2
17:00	26	26	8	0	60	10	3	1	0	14	0	2	0	0	2	0	0	0	0	0	2
17:15	33	15	11	0	59	5	5	3	0	13	0	0	0	0	0	0	0	0	0	0	0
17:30	31	21	17	0	69	5	5	3	0	13	0	1	0	0	1	0	0	0	0	0	0
17:45	28	23	33	0	84	4	9	5	0	18	0	0	0	0	0	0	0	0	0	0	0
18:00	26	24	22	0	72	2	4	8	0	14	0	0	0	0	0	0	0	0	0	0	0
18:15	27	13	22	0	62	6	7	3	0	16	0	1	0	0	1	0	0	0	0	0	0
18:30	20	12	11	0	43	3	5	0	0	8	0	0	0	0	0	0	0	0	0	0	0
18:45	25	20	17	0	62	5	2	3	0	10	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	322	239	169	0	730	50	57	29	0	136	0	7	0	0	7	0	0	0	0	0	7
GRAND TOTAL	807	627	274	0	1708	123	146	49	0	318	0	23	1	0	24	0	0	0	0	0	8

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Laurier Dr-Gilroy St
Site ID: 1925700012
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	215	404	619
MT	39	60	99
HT	6	5	11
Bicycles	0	0	0
	260	**469**	**729**

Malden Rd

Bicycles	0	0	0	0
HT	2	2	2	0
MT	14	19	6	0
Cars	64	121	30	0
Totals	**80**	**142**	**38**	**0**

East Approach

	Out	In	Total
Cars	67	141	208
MT	25	36	61
HT	7	7	14
Bicycles	0	0	0
	99	**184**	**283**

Laurier Dr

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	14	104	**118**
0	4	27	94	**125**
0	1	6	36	**43**

Peds: 0



Peds: 0

Peds: 0

Peds: 3

Gilroy St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
24	16	7	1	0
67	45	18	4	0
8	6	0	2	0

West Approach

	Out	In	Total
Cars	234	131	365
MT	47	39	86
HT	5	6	11
Bicycles	0	0	0
	286	**176**	**462**

Totals	**29**	**327**	**21**	**0**
Cars	22	284	17	0
MT	7	39	3	0
HT	0	4	1	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	323	163	486
MT	49	25	74
HT	5	5	10
Bicycles	0	0	0
	377	**193**	**570**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Laurier Dr-Gilroy St
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Gilroy St						West Approach Laurier Dr						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	8	35	12	0	0	55	5	68	6	0	1	79	2	19	5	0	0	26	27	32	9	0	0	68	228
08:15	6	38	13	0	0	57	3	95	4	0	0	102	0	14	7	0	0	21	22	31	12	0	0	65	245
08:30	12	33	33	0	0	78	8	83	6	0	1	97	3	15	6	0	0	24	34	32	9	0	0	75	274
08:45	12	36	22	0	0	70	13	81	5	0	1	99	3	19	6	0	0	28	35	30	13	0	0	78	275
Grand Total	**38**	**142**	**80**	**0**	**0**	**260**	**29**	**327**	**21**	**0**	**3**	**377**	**8**	**67**	**24**	**0**	**0**	**99**	**118**	**125**	**43**	**0**	**0**	**286**	**1022**
Approach %	14.6	54.6	30.8	0		-	7.7	86.7	5.6	0		-	8.1	67.7	24.2	0		-	41.3	43.7	15	0		-	
Totals %	3.7	13.9	7.8	0		25.4	2.8	32	2.1	0		36.9	0.8	6.6	2.3	0		9.7	11.5	12.2	4.2	0		28	
PHF	**0.79**	**0.93**	**0.61**	**0**		**0.83**	**0.56**	**0.86**	**0.88**	**0**		**0.92**	**0.67**	**0.88**	**0.86**	**0**		**0.88**	**0.84**	**0.98**	**0.83**	**0**		**0.92**	**0.93**
Cars	30	121	64	0		215	22	284	17	0		323	6	45	16	0		67	104	94	36	0		234	839
% Cars	78.9	85.2	80	0		82.7	75.9	86.9	81	0		85.7	75	67.2	66.7	0		67.7	88.1	75.2	83.7	0		81.8	82.1
Medium Trucks	6	19	14	0		39	7	39	3	0		49	0	18	7	0		25	14	27	6	0		47	160
% Medium Trucks	15.8	13.4	17.5	0		15	24.1	11.9	14.3	0		13	0	26.9	29.2	0		25.3	11.9	21.6	14	0		16.4	15.7
Heavy Trucks	2	2	2	0		6	0	4	1	0		5	2	4	1	0		7	0	4	1	0		5	23
% Heavy Trucks	5.3	1.4	2.5	0		2.3	0	1.2	4.8	0		1.3	25	6	4.2	0		7.1	0	3.2	2.3	0		1.7	2.3
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					3	-					0	-					0	-	3
% Peds					0	-					100	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:15:00
To:	14:00:00	To:	13:15:00

Intersection: Malden Rd & Laurier Dr-Gilroy St
Site ID: 1925700012
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	343	321	664
MT	66	60	126
HT	1	5	6
Bicycles	0	0	0
	410	**386**	**796**

Malden Rd

Bicycles	0	0	0	0
HT	0	0	1	0
MT	19	37	10	0
Cars	131	189	23	0
Totals	**150**	**226**	**34**	**0**

East Approach

	Out	In	Total
Cars	128	116	244
MT	30	28	58
HT	6	5	11
Bicycles	0	0	0
	164	**149**	**313**

Laurier Dr

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	15	103	**118**
0	2	13	76	**91**
0	0	3	18	**21**

Peds: 1

Peds: 0

Peds: 0

Gilroy St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
47	36	9	2	0
98	78	19	1	0
19	14	2	3	0

West Approach

	Out	In	Total
Cars	197	224	421
MT	31	40	71
HT	2	1	3
Bicycles	0	0	0
	230	**265**	**495**

Totals	**17**	**221**	**24**	**0**
Cars	15	182	17	0
MT	2	36	5	0
HT	0	3	2	0
Bicycles	0	0	0	0

Malden Rd

South Approach

	Out	In	Total
Cars	214	221	435
MT	43	42	85
HT	5	3	8
Bicycles	0	0	0
	262	**266**	**528**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Laurier Dr-Gilroy St
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:15 - 13:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Gilroy St						West Approach Laurier Dr						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:15	7	49	35	0	0	91	3	49	4	0	0	56	5	26	12	0	0	43	24	23	6	0	0	53	243
12:30	7	67	45	0	0	119	4	48	5	0	0	57	6	27	15	0	0	48	30	20	3	0	0	53	277
12:45	11	60	32	0	0	103	6	61	9	0	0	76	4	23	10	0	0	37	28	24	6	0	0	58	274
13:00	9	50	38	0	0	97	4	63	6	0	0	73	4	22	10	0	0	36	36	24	6	0	1	66	272
Grand Total	**34**	**226**	**150**	**0**	**0**	**410**	**17**	**221**	**24**	**0**	**0**	**262**	**19**	**98**	**47**	**0**	**0**	**164**	**118**	**91**	**21**	**0**	**1**	**230**	**1066**
Approach %	8.3	55.1	36.6	0		-	6.5	84.4	9.2	0		-	11.6	59.8	28.7	0		-	51.3	39.6	9.1	0		-	
Totals %	3.2	21.2	14.1	0		38.5	1.6	20.7	2.3	0		24.6	1.8	9.2	4.4	0		15.4	11.1	8.5	2	0		21.6	
PHF	**0.77**	**0.84**	**0.83**	**0**		**0.86**	**0.71**	**0.88**	**0.67**	**0**		**0.86**	**0.79**	**0.91**	**0.78**	**0**		**0.85**	**0.82**	**0.95**	**0.88**	**0**		**0.87**	**0.96**
Cars	23	189	131	0		343	15	182	17	0		214	14	78	36	0		128	103	76	18	0		197	882
% Cars	67.6	83.6	87.3	0		83.7	88.2	82.4	70.8	0		81.7	73.7	79.6	76.6	0		78	87.3	83.5	85.7	0		85.7	82.7
Medium Trucks	10	37	19	0		66	2	36	5	0		43	2	19	9	0		30	15	13	3	0		31	170
% Medium Trucks	29.4	16.4	12.7	0		16.1	11.8	16.3	20.8	0		16.4	10.5	19.4	19.1	0		18.3	12.7	14.3	14.3	0		13.5	15.9
Heavy Trucks	1	0	0	0		1	0	3	2	0		5	3	1	2	0		6	0	2	0	0		2	14
% Heavy Trucks	2.9	0	0	0		0.2	0	1.4	8.3	0		1.9	15.8	1	4.3	0		3.7	0	2.2	0	0		0.9	1.3
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					0	-					0	-					1	-	1
% Peds					0	-					0	-					0	-					100	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:15:00
To:	19:00:00	To:	18:15:00

Intersection: Malden Rd & Laurier Dr-Gilroy St
Site ID: 1925700012
Count Date: Jul 31, 2019

Weather conditions:

**** Signalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	630	393	1023
MT	101	74	175
HT	1	6	7
Bicycles	0	0	0
	732	**473**	**1205**

Malden Rd

Bicycles	0	0	0	0
HT	0	0	1	0
MT	23	70	8	0
Cars	150	397	83	0
Totals	**173**	**467**	**92**	**0**

East Approach

	Out	In	Total
Cars	180	182	362
MT	37	37	74
HT	3	3	6
Bicycles	0	0	0
	220	**222**	**442**

Laurier Dr

Bicycles	HT	MT	Cars	Totals
0	0	0	0	**0**
0	0	16	118	**134**
0	1	23	83	**107**
0	0	19	83	**102**

Peds: 0 | Peds: 0 | Peds: 3 | Peds: 2

N W E S

Gilroy St

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
55	44	10	1	0
123	100	23	0	0
42	36	4	2	0

West Approach

	Out	In	Total
Cars	284	273	557
MT	58	51	109
HT	1	0	1
Bicycles	0	0	0
	343	**324**	**667**

Malden Rd

Totals	**28**	**284**	**23**	**0**
Cars	23	231	16	0
MT	5	48	6	0
HT	0	5	1	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	270	516	786
MT	59	93	152
HT	6	2	8
Bicycles	0	0	0
	335	**611**	**946**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Laurier Dr-Gilroy St
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:15 - 18:15)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Gilroy St						West Approach Laurier Dr						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:15	22	105	53	0	0	180	7	67	0	0	0	74	16	40	20	0	0	76	38	20	14	0	0	72	402
17:30	22	129	38	0	0	189	7	63	7	0	0	77	10	32	15	0	1	57	36	27	20	0	0	83	406
17:45	25	113	45	0	0	183	6	75	9	0	2	90	12	23	10	0	2	45	32	32	38	0	0	102	420
18:00	23	120	37	0	0	180	8	79	7	0	0	94	4	28	10	0	0	42	28	28	30	0	0	86	402
Grand Total	**92**	**467**	**173**	**0**	**0**	**732**	**28**	**284**	**23**	**0**	**2**	**335**	**42**	**123**	**55**	**0**	**3**	**220**	**134**	**107**	**102**	**0**	**0**	**343**	**1630**
Approach %	12.6	63.8	23.6	0		-	8.4	84.8	6.9	0		-	19.1	55.9	25	0		-	39.1	31.2	29.7	0		-	
Totals %	5.6	28.7	10.6	0		44.9	1.7	17.4	1.4	0		20.6	2.6	7.5	3.4	0		13.5	8.2	6.6	6.3	0		21	
PHF	**0.92**	**0.91**	**0.82**	**0**		**0.97**	**0.88**	**0.9**	**0.64**	**0**		**0.89**	**0.66**	**0.77**	**0.69**	**0**		**0.72**	**0.88**	**0.84**	**0.67**	**0**		**0.84**	**0.97**
Cars	83	397	150	0		630	23	231	16	0		270	36	100	44	0		180	118	83	83	0		284	1364
% Cars	90.2	85	86.7	0		86.1	82.1	81.3	69.6	0		80.6	85.7	81.3	80	0		81.8	88.1	77.6	81.4	0		82.8	83.7
Medium Trucks	8	70	23	0		101	5	48	6	0		59	4	23	10	0		37	16	23	19	0		58	255
% Medium Trucks	8.7	15	13.3	0		13.8	17.9	16.9	26.1	0		17.6	9.5	18.7	18.2	0		16.8	11.9	21.5	18.6	0		16.9	15.6
Heavy Trucks	1	0	0	0		1	0	5	1	0		6	2	0	1	0		3	0	1	0	0		1	11
% Heavy Trucks	1.1	0	0	0		0.1	0	1.8	4.3	0		1.8	4.8	0	1.8	0		1.4	0	0.9	0	0		0.3	0.7
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					2	-					3	-					0	-	5
% Peds					0	-					40	-					60	-					0	-	

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Project #19257 - Stantec

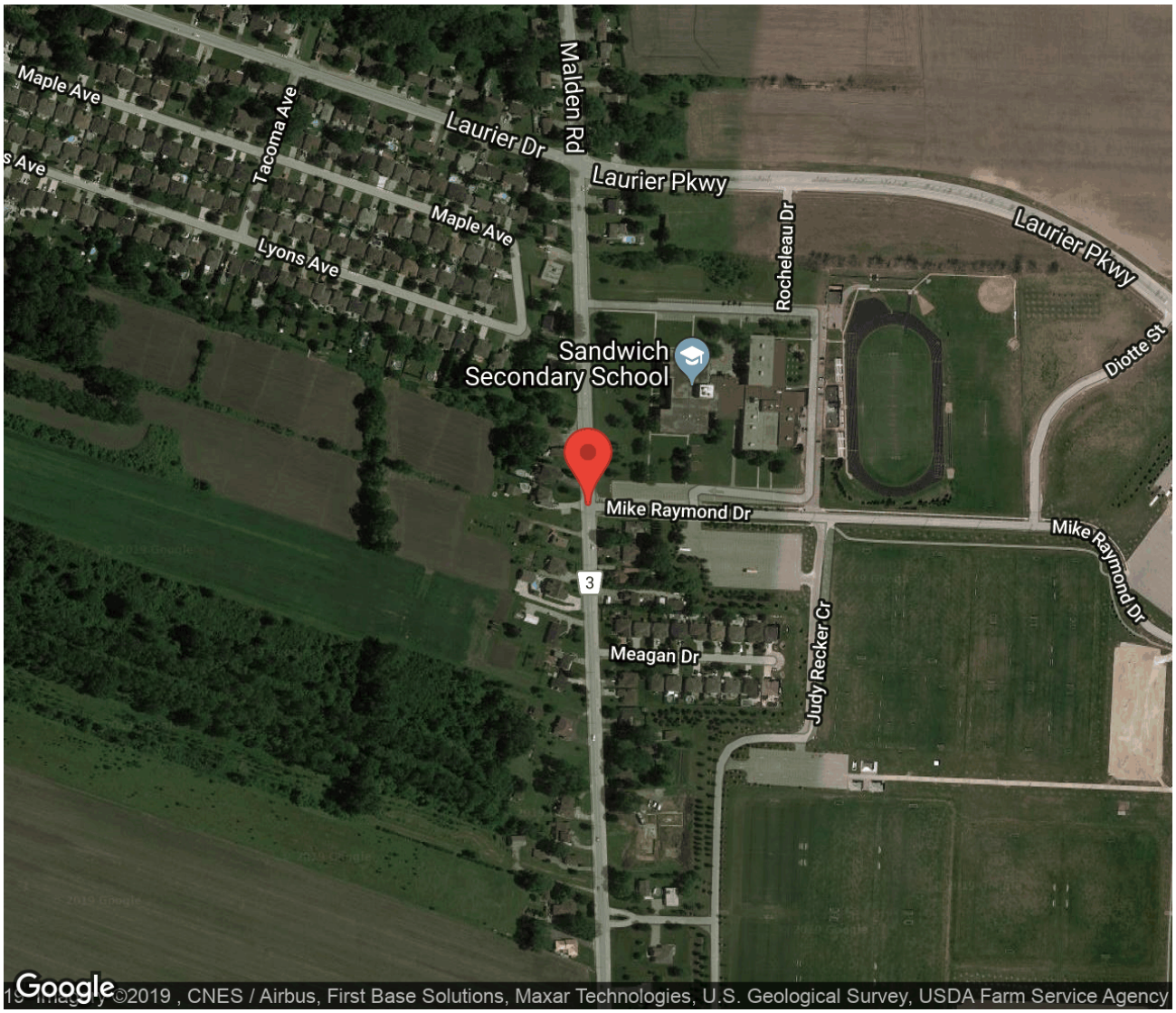
Intersection Count Report

Intersection:	Malden Rd & Mike Raymond Dr
Municipality:	LaSalle
Count Date:	Jul 31, 2019
Site Code:	1925700013
Count Categories:	Cars, Medium Trucks, Heavy Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 12:00-14:00, 16:00-19:00
Weather:	Clear

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Map

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019



Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

Malden Rd - Traffic Summary

	North Approach Totals						South Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	38	77	0	0	115	0	0	261	13	0	274	0
08:00 - 09:00	48	145	0	0	193	0	0	301	22	0	323	0
09:00 - 10:00	22	119	0	0	141	0	0	237	11	0	248	0
BREAK												
12:00 - 13:00	20	245	0	0	265	0	0	232	12	0	244	0
13:00 - 14:00	16	230	0	0	246	0	0	216	9	0	225	0
BREAK												
16:00 - 17:00	36	390	0	0	426	0	0	227	10	0	237	0
17:00 - 18:00	123	449	0	0	572	0	0	259	31	0	290	0
18:00 - 19:00	187	308	0	0	495	0	0	239	33	0	272	0
GRAND TOTAL	**490**	**1963**	**0**	**0**	**2453**	**0**	**0**	**1972**	**141**	**0**	**2113**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Summary

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

Mike Raymond Dr - Traffic Summary

	East Approach Totals						West Approach Totals					
	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
07:00 - 08:00	7	0	27	0	34	0	0	0	0	0	0	0
08:00 - 09:00	6	0	74	0	80	0	0	0	0	0	0	0
09:00 - 10:00	13	0	29	0	42	0	0	0	0	0	0	0
BREAK												
12:00 - 13:00	17	0	40	0	57	0	0	0	0	0	0	0
13:00 - 14:00	7	0	19	0	26	0	0	0	0	0	0	0
BREAK												
16:00 - 17:00	13	0	54	0	67	0	0	0	0	0	0	0
17:00 - 18:00	15	0	42	0	57	0	0	0	0	0	0	0
18:00 - 19:00	14	0	66	0	80	0	0	0	0	0	0	0
GRAND TOTAL	**92**	**0**	**351**	**0**	**443**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	4	17	0	0	21	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	0
07:15	11	16	0	0	27	2	7	0	0	9	0	0	0	0	0	0	0	0	0	0	0
07:30	7	10	0	0	17	0	5	0	0	5	0	1	0	0	1	0	0	0	0	0	0
07:45	12	15	0	0	27	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
08:00	8	27	0	0	35	1	8	0	0	9	0	2	0	0	2	0	0	0	0	0	0
08:15	13	28	0	0	41	0	8	0	0	8	0	1	0	0	1	0	0	0	0	0	0
08:30	11	32	0	0	43	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
08:45	13	31	0	0	44	1	5	0	0	6	0	2	0	0	2	0	0	0	0	0	0
09:00	4	25	0	0	29	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
09:15	4	24	0	0	28	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0
09:30	6	25	0	0	31	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
09:45	7	20	0	0	27	0	8	0	0	8	0	4	0	0	4	0	0	0	0	0	0
SUBTOTAL	100	270	0	0	370	8	60	0	0	68	0	11	0	0	11	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	3	50	0	0	53	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
12:15	3	48	0	0	51	2	6	0	0	8	0	1	0	0	1	0	0	0	0	0	0
12:30	0	62	0	0	62	3	11	0	0	14	0	0	0	0	0	0	0	0	0	0	0
12:45	8	53	0	0	61	1	6	0	0	7	0	1	0	0	1	0	0	0	0	0	0
13:00	3	43	0	0	46	1	12	0	0	13	0	1	0	0	1	0	0	0	0	0	0
13:15	3	48	0	0	51	1	6	0	0	7	0	2	0	0	2	0	0	0	0	0	0
13:30	5	47	0	0	52	2	9	0	0	11	0	1	0	0	1	0	0	0	0	0	0
13:45	1	44	0	0	45	0	15	0	0	15	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	26	395	0	0	421	10	72	0	0	82	0	8	0	0	8	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

North Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	7	53	0	0	60	1	12	0	0	13	0	0	0	0	0	0	0	0	0	0	0
16:15	5	82	0	0	87	1	15	0	0	16	0	0	0	0	0	0	0	0	0	0	0
16:30	12	90	0	0	102	2	23	0	0	25	0	2	0	0	2	0	0	0	0	0	0
16:45	8	86	0	0	94	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	0
17:00	9	94	0	0	103	1	15	0	0	16	0	0	0	0	0	0	0	0	0	0	0
17:15	15	95	0	0	110	1	23	0	0	24	0	0	0	0	0	0	0	0	0	0	0
17:30	32	99	0	0	131	4	21	0	0	25	0	2	0	0	2	0	0	0	0	0	0
17:45	53	85	0	0	138	8	15	0	0	23	0	0	0	0	0	0	0	0	0	0	0
18:00	57	76	0	0	133	9	12	0	0	21	0	0	0	0	0	0	0	0	0	0	0
18:15	53	64	0	0	117	5	11	0	0	16	0	0	0	0	0	0	0	0	0	0	0
18:30	29	69	0	0	98	1	14	0	0	15	0	0	0	0	0	0	0	0	0	0	0
18:45	31	49	0	0	80	2	13	0	0	15	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	311	942	0	0	1253	35	201	0	0	236	0	4	0	0	4	0	0	0	0	0	0
GRAND TOTAL	437	1607	0	0	2044	53	333	0	0	386	0	23	0	0	23	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
07:00	0	28	1	0	29	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0
07:15	0	54	4	0	58	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
07:30	0	68	3	0	71	0	22	0	0	22	0	0	0	0	0	0	0	0	0	0	0
07:45	0	60	5	0	65	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
08:00	0	47	6	0	53	0	10	1	0	11	0	0	0	0	0	0	0	0	0	0	0
08:15	0	72	3	0	75	0	9	0	0	9	0	2	0	0	2	0	0	0	0	0	0
08:30	0	72	5	0	77	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0
08:45	0	66	5	0	71	0	14	1	0	15	0	0	0	0	0	0	0	0	0	0	0
09:00	0	35	2	0	37	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0
09:15	0	59	4	0	63	0	7	0	0	7	0	1	0	0	1	0	0	0	0	0	0
09:30	0	55	2	0	57	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
09:45	0	51	3	0	54	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	667	43	0	710	0	128	3	0	131	0	4	0	0	4	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
					Total					Total					Total					Total	
12:00	0	62	1	0	63	0	6	0	0	6	0	2	0	0	2	0	0	0	0	0	0
12:15	0	43	3	0	46	0	8	0	0	8	0	1	0	0	1	0	0	0	0	0	0
12:30	0	39	3	0	42	0	8	3	0	11	0	1	0	0	1	0	0	0	0	0	0
12:45	0	53	2	0	55	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0
13:00	0	58	0	0	58	0	8	0	0	8	0	2	0	0	2	0	0	0	0	0	0
13:15	0	45	2	0	47	0	8	2	0	10	0	3	0	0	3	0	0	0	0	0	0
13:30	0	41	2	0	43	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0
13:45	0	40	2	0	42	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	381	15	0	396	0	58	6	0	64	0	9	0	0	9	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

South Approach - Malden Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	0	41	1	0	42	0	8	0	0	8	0	2	0	0	2	0	0	0	0	0	0
16:15	0	43	4	0	47	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0
16:30	0	44	2	0	46	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
16:45	0	62	3	0	65	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0
17:00	0	43	1	0	44	0	9	1	0	10	0	2	0	0	2	0	0	0	0	0	0
17:15	0	48	3	0	51	0	14	1	0	15	0	0	0	0	0	0	0	0	0	0	0
17:30	0	55	8	0	63	0	12	2	0	14	0	1	0	0	1	0	0	0	0	0	0
17:45	0	57	13	0	70	0	16	2	0	18	0	2	0	0	2	0	0	0	0	0	0
18:00	0	57	12	0	69	0	11	2	0	13	0	0	0	0	0	0	0	0	0	0	0
18:15	0	57	7	0	64	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	0
18:30	0	34	5	0	39	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0
18:45	0	50	6	0	56	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	591	65	0	656	0	127	9	0	136	0	7	0	0	7	0	0	0	0	0	0
GRAND TOTAL	0	1639	123	0	1762	0	313	18	0	331	0	20	0	0	20	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Mike Raymond Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	2	0	2	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0
07:30	4	0	5	0	9	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0
07:45	1	0	9	0	10	1	0	4	0	5	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	19	0	19	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0
08:15	2	0	16	0	18	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
08:30	2	0	14	0	16	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	1	0	15	0	16	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0
09:00	1	0	9	0	10	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0
09:15	2	0	11	0	13	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
09:30	2	0	4	0	6	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0
09:45	2	0	0	0	2	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	0
SUBTOTAL	17	0	107	0	124	6	0	15	0	21	3	0	8	0	11	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Mike Raymond Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
12:00	4	0	13	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	4	0	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	3	0	4	0	7	1	0	5	0	6	0	0	0	0	0	0	0	0	0	0	0
12:45	4	0	8	0	12	1	0	5	0	6	0	0	1	0	1	0	0	0	0	0	0
13:00	3	0	5	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	3	0	3	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0
13:30	1	0	0	0	1	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
13:45	2	0	4	0	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	21	0	41	0	62	3	0	16	0	19	0	0	2	0	2	0	0	0	0	0	0

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Traffic Count Data

Intersection: Malden Rd & Mike Raymond Dr
Municipality: LaSalle
Count Date: Jul 31, 2019

East Approach - Mike Raymond Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
16:00	4	0	19	0	23	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
16:15	4	0	8	0	12	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
16:30	4	0	9	0	13	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
16:45	0	0	11	0	11	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
17:00	3	0	5	0	8	1	0	1	0	2	0	0	1	0	1	0	0	0	0	0	0
17:15	3	0	11	0	14	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
17:30	4	0	7	0	11	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
17:45	3	0	13	0	16	1	0	1	0	2	0	0	1	0	1	0	0	0	0	0	0
18:00	4	0	20	0	24	0	0	4	0	4	0	0	1	0	1	0	0	0	0	0	0
18:15	1	0	8	0	9	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
18:30	2	0	11	0	13	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0
18:45	5	0	17	0	22	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	37	0	139	0	176	5	0	15	0	20	0	0	8	0	8	0	0	0	0	0	0
GRAND TOTAL	75	0	287	0	362	14	0	46	0	60	3	0	18	0	21	0	0	0	0	0	0

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	10:00:00	To:	09:00:00

Intersection: Malden Rd & Mike Raymond Dr
Site ID: 1925700013
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	163	321	484
MT	25	49	74
HT	5	5	10
Bicycles	0	0	0
	193	**375**	**568**

Malden Rd

Bicycles	0	0	0
HT	5	0	0
MT	22	3	0
Cars	118	45	0
Totals	**145**	**48**	**0**

Peds: 0

Peds: 0

Peds: 0

Totals	**301**	**22**	**0**
Cars	257	19	0
MT	42	3	0
HT	2	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	69	64	133
MT	8	6	14
HT	3	0	3
Bicycles	0	0	0
	80	**70**	**150**

Mike Raymond Dr

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	74	64	7	3	0
	6	5	1	0	0

South Approach

	Out	In	Total
Cars	276	123	399
MT	45	23	68
HT	2	5	7
Bicycles	0	0	0
	323	**151**	**474**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Mike Raymond Dr
Count Date: Jul 31, 2019
Period: 07:00 - 10:00

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

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Mike Raymond Dr						West Approach						Total Vehicles
	↰	↑	↱	↻	Peds	Total	↰	↑	↱	↻	Peds	Total	↰	↑	↱	↻	Peds	Total	↰	↑	↱	↻	Peds	Total	
08:00	9	37		0	0	46		57	7	0	0	64	0		22	0	0	22					0		132
08:15	13	37		0	0	50		83	3	0	0	86	3		19	0	0	22					0		158
08:30	12	33		0	0	45		81	6	0	0	87	2		15	0	0	17					0		149
08:45	14	38		0	0	52		80	6	0	0	86	1		18	0	0	19					0		157
Grand Total	**48**	**145**		**0**	**0**	**193**		**301**	**22**	**0**	**0**	**323**	**6**		**74**	**0**	**0**	**80**					**0**	**0**	**596**
Approach %	24.9	75.1		0		-		93.2	6.8	0		-	7.5		92.5	0		-						-	
Totals %	8.1	24.3		0		32.4		50.5	3.7	0		54.2	1		12.4	0		13.4						0	
PHF	**0.86**	**0.95**		**0**		**0.93**		**0.91**	**0.79**	**0**		**0.93**	**0.5**		**0.84**	**0**		**0.91**						**0**	**0.94**
Cars	45	118		0		163		257	19	0		276	5		64	0		69						0	508
% Cars	93.8	81.4		0		84.5		85.4	86.4	0		85.4	83.3		86.5	0		86.3						0	85.2
Medium Trucks	3	22		0		25		42	3	0		45	1		7	0		8						0	78
% Medium Trucks	6.3	15.2		0		13		14	13.6	0		13.9	16.7		9.5	0		10						0	13.1
Heavy Trucks	0	5		0		5		2	0	0		2	0		3	0		3						0	10
% Heavy Trucks	0	3.4		0		2.6		0.7	0	0		0.6	0		4.1	0		3.8						0	1.7
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	12:00:00	From:	12:00:00
To:	14:00:00	To:	13:00:00

Intersection: Malden Rd & Mike Raymond Dr
Site ID: 1925700013
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	227	226	453
MT	36	41	77
HT	2	5	7
Bicycles	0	0	0
	265	**272**	**537**

Malden Rd

Bicycles	0	0	0
HT	2	0	0
MT	30	6	0
Cars	213	14	0
Totals	**245**	**20**	**0**

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Totals	**232**	**12**	**0**
Cars	197	9	0
MT	31	3	0
HT	4	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	44	23	67
MT	12	9	21
HT	1	0	1
Bicycles	0	0	0
	57	**32**	**89**

Mike Raymond Dr

	Totals	Cars	MT	HT	Bicycles
	0	0	0	0	0
	40	29	10	1	0
	17	15	2	0	0

South Approach

	Out	In	Total
Cars	206	228	434
MT	34	32	66
HT	4	2	6
Bicycles	0	0	0
	244	**262**	**506**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

Intersection: Malden Rd & Mike Raymond Dr
Count Date: Jul 31, 2019
Period: 12:00 - 14:00

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Mike Raymond Dr						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	3	57		0	0	60		70	1	0	0	71	4		13	0	0	17					0		148
12:15	5	55		0	0	60		52	3	0	0	55	4		4	0	0	8					0		123
12:30	3	73		0	0	76		48	6	0	0	54	4		9	0	0	13					0		143
12:45	9	60		0	0	69		62	2	0	0	64	5		14	0	0	19					0		152
Grand Total	**20**	**245**		**0**	**0**	**265**		**232**	**12**	**0**	**0**	**244**	**17**		**40**	**0**	**0**	**57**					**0**	**0**	**566**
Approach %	7.5	92.5		0		-		95.1	4.9	0		-	29.8		70.2	0		-						-	
Totals %	3.5	43.3		0		46.8		41	2.1	0		43.1	3		7.1	0		10.1						0	
PHF	**0.56**	**0.84**		**0**		**0.87**		**0.83**	**0.5**	**0**		**0.86**	**0.85**		**0.71**	**0**		**0.75**						**0**	**0.93**
Cars	14	213		0		227		197	9	0		206	15		29	0		44						0	477
% Cars	70	86.9		0		85.7		84.9	75	0		84.4	88.2		72.5	0		77.2						0	84.3
Medium Trucks	6	30		0		36		31	3	0		34	2		10	0		12						0	82
% Medium Trucks	30	12.2		0		13.6		13.4	25	0		13.9	11.8		25	0		21.1						0	14.5
Heavy Trucks	0	2		0		2		4	0	0		4	0		1	0		1						0	7
% Heavy Trucks	0	0.8		0		0.8		1.7	0	0		1.6	0		2.5	0		1.8						0	1.2
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Specified Period		One Hour Peak	
From:	16:00:00	From:	17:30:00
To:	19:00:00	To:	18:30:00

Intersection: Malden Rd & Mike Raymond Dr
Site ID: 1925700013
Count Date: Jul 31, 2019

Weather conditions:

**** Unsignalized Intersection ****

Major Road: Malden Rd runs N/S

North Approach

	Out	In	Total
Cars	519	274	793
MT	85	55	140
HT	2	5	7
Bicycles	0	0	0
	606	**334**	**940**

Malden Rd

Bicycles	0	0	0
HT	2	0	0
MT	59	26	0
Cars	324	195	0
Totals	**385**	**221**	**0**

Peds: 0

Peds: 0

Peds: 0

Totals	**277**	**47**	**0**
Cars	226	40	0
MT	48	7	0
HT	3	0	0
Bicycles	0	0	0

Malden Rd

East Approach

	Out	In	Total
Cars	60	235	295
MT	8	33	41
HT	2	0	2
Bicycles	0	0	0
	70	**268**	**338**

Mike Raymond Dr

Totals	Cars	MT	HT	Bicycles
0	0	0	0	0
57	48	7	2	0
13	12	1	0	0

South Approach

	Out	In	Total
Cars	266	336	602
MT	55	60	115
HT	3	2	5
Bicycles	0	0	0
	324	**398**	**722**

Cars - Cars MT - Medium Trucks HT - Heavy Trucks Bicycles - Bicycles

Comments

Ontario Traffic Inc.
TRAFFIC MONITORING SERVICES & PRODUCTS

Peak Hour Summary

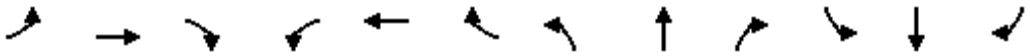
Intersection: Malden Rd & Mike Raymond Dr
Count Date: Jul 31, 2019
Period: 16:00 - 19:00

Peak Hour Data (17:30 - 18:30)

Start Time	North Approach Malden Rd						South Approach Malden Rd						East Approach Mike Raymond Dr						West Approach						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
17:30	36	122		0	0	158		68	10	0	0	78	4		8	0	0	12					0		248
17:45	61	100		0	0	161		75	15	0	0	90	4		15	0	0	19					0		270
18:00	66	88		0	0	154		68	14	0	0	82	4		25	0	0	29					0		265
18:15	58	75		0	0	133		66	8	0	0	74	1		9	0	0	10					0		217
Grand Total	**221**	**385**		**0**	**0**	**606**		**277**	**47**	**0**	**0**	**324**	**13**		**57**	**0**	**0**	**70**					**0**	**0**	**1000**
Approach %	36.5	63.5		0		-		85.5	14.5	0		-	18.6		81.4	0		-						-	
Totals %	22.1	38.5		0		60.6		27.7	4.7	0		32.4	1.3		5.7	0		7						0	
PHF	**0.84**	**0.79**		**0**		**0.94**		**0.92**	**0.78**	**0**		**0.9**	**0.81**		**0.57**	**0**		**0.6**						**0**	**0.93**
Cars	195	324		0		519		226	40	0		266	12		48	0		60						0	845
% Cars	88.2	84.2		0		85.6		81.6	85.1	0		82.1	92.3		84.2	0		85.7						0	84.5
Medium Trucks	26	59		0		85		48	7	0		55	1		7	0		8						0	148
% Medium Trucks	11.8	15.3		0		14		17.3	14.9	0		17	7.7		12.3	0		11.4						0	14.8
Heavy Trucks	0	2		0		2		3	0	0		3	0		2	0		2						0	7
% Heavy Trucks	0	0.5		0		0.3		1.1	0	0		0.9	0		3.5	0		2.9						0	0.7
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0						0	0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Appendix B SYNCHRO REPORTS





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	1	2	4	231	1	26	6	217	311	19	174	1
Future Volume (veh/h)	1	2	4	231	1	26	6	217	311	19	174	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	2	4	243	1	27	6	228	327	20	183	1
Approach Volume (veh/h)		7			271			561			204	
Crossing Volume (veh/h)		446			235			23			250	
High Capacity (veh/h)		975			1152			1360			1138	
High v/c (veh/h)		0.01			0.24			0.41			0.18	
Low Capacity (veh/h)		791			950			1139			938	
Low v/c (veh/h)		0.01			0.29			0.49			0.22	

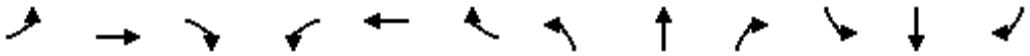
Intersection Summary					
Maximum v/c High	0.41				
Maximum v/c Low	0.49				
Intersection Capacity Utilization	59.6%	ICU Level of Service		B	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	26	18	33	47	19	543	76	37	471
v/c Ratio	0.06	0.03	0.06	0.08	0.05	0.80	0.12	0.21	0.36
Control Delay	17.7	9.7	17.5	7.0	1.7	14.8	0.4	14.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	17.7	9.7	17.5	7.0	1.7	15.0	0.4	14.6	14.9
Queue Length 50th (m)	2.3	0.2	2.9	0.2	0.3	17.0	0.3	3.3	23.3
Queue Length 95th (m)	8.3	4.6	9.6	7.2	m0.3	33.3	0.0	7.7	26.1
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	470	717	566	590	523	898	805	233	1711
Starvation Cap Reductn	0	0	0	0	0	36	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.03	0.06	0.08	0.04	0.63	0.09	0.16	0.28

Intersection Summary

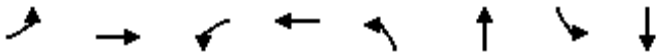
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	2	15	31	2	42	18	510	71	35	416	26
Future Volume (vph)	24	2	15	31	2	42	18	510	71	35	416	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1628		1659	1299		1948	1597	1372	1484	3033	
Flt Permitted	0.73	1.00		0.75	1.00		0.45	1.00	1.00	0.27	1.00	
Satd. Flow (perm)	1083	1628		1302	1299		930	1597	1372	415	3033	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	26	2	16	33	2	45	19	543	76	37	443	28
RTOR Reduction (vph)	0	9	0	0	25	0	0	0	44	0	7	0
Lane Group Flow (vph)	26	9	0	33	22	0	19	543	32	37	464	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	34.8	34.8		34.8	34.8		34.2	34.2	34.2	34.2	34.2	
Effective Green, g (s)	34.8	34.8		34.8	34.8		34.2	34.2	34.2	34.2	34.2	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.43	0.43	0.43	0.43	0.43	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	471	708		566	565		397	682	586	177	1296	
v/s Ratio Prot		0.01			0.02			c0.34			0.15	
v/s Ratio Perm	0.02			c0.03			0.02		0.02	0.09		
v/c Ratio	0.06	0.01		0.06	0.04		0.05	0.80	0.06	0.21	0.36	
Uniform Delay, d1	13.1	12.8		13.1	13.0		13.4	19.9	13.4	14.4	15.5	
Progression Factor	1.00	1.00		1.00	1.00		0.14	0.32	0.00	1.00	1.00	
Incremental Delay, d2	0.2	0.0		0.2	0.1		0.2	8.7	0.2	2.7	0.8	
Delay (s)	13.3	12.9		13.3	13.1		2.1	15.2	0.2	17.1	16.2	
Level of Service	B	B		B	B		A	B	A	B	B	
Approach Delay (s)		13.1			13.2			13.0			16.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

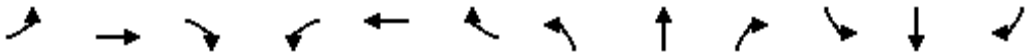
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	32	56	52	71	659	74	408
v/c Ratio	0.04	0.05	0.13	0.09	0.16	0.66	0.24	0.41
Control Delay	16.9	9.4	18.1	8.6	6.8	17.0	10.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	9.4	18.1	8.6	6.8	17.0	10.7	15.5
Queue Length 50th (m)	2.0	0.8	5.4	1.4	2.0	31.2	4.3	13.4
Queue Length 95th (m)	7.0	6.4	13.9	8.5	m4.2	62.6	8.9	22.2
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	499	595	421	601	434	1452	314	1437
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.05	0.13	0.09	0.16	0.45	0.24	0.28

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	8	22	53	14	35	67	540	80	70	356	27
Future Volume (vph)	21	8	22	53	14	35	67	540	80	70	356	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.89		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)	1738	1542		1442	1532		1574	2957		1544	2943	
Flt Permitted	0.72	1.00		0.74	1.00		0.49	1.00		0.30	1.00	
Satd. Flow (perm)	1323	1542		1118	1532		820	2957		495	2943	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	9	23	56	15	37	71	574	85	74	379	29
RTOR Reduction (vph)	0	14	0	0	23	0	0	19	0	0	9	0
Lane Group Flow (vph)	22	18	0	56	29	0	71	640	0	74	399	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.2	30.2		30.2	30.2		33.7	26.7		33.7	26.7	
Effective Green, g (s)	30.2	30.2		30.2	30.2		33.7	26.7		33.7	26.7	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.42	0.33		0.42	0.33	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	499	582		422	578		411	986		300	982	
v/s Ratio Prot		0.01			0.02		0.02	c0.22		c0.02	0.14	
v/s Ratio Perm	0.02			c0.05			0.06			0.08		
v/c Ratio	0.04	0.03		0.13	0.05		0.17	0.65		0.25	0.41	
Uniform Delay, d1	15.8	15.7		16.3	15.8		14.0	22.7		14.4	20.5	
Progression Factor	1.00	1.00		1.00	1.00		0.58	0.65		0.86	0.72	
Incremental Delay, d2	0.2	0.1		0.7	0.2		0.8	2.9		1.9	1.2	
Delay (s)	15.9	15.8		17.0	16.0		9.0	17.6		14.2	16.0	
Level of Service	B	B		B	B		A	B		B	B	
Approach Delay (s)		15.8			16.5			16.7			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

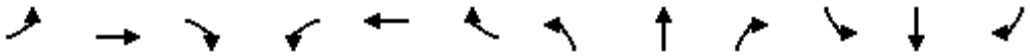
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	227	141	72	28	23	111	566	23	451
v/c Ratio	0.49	0.32	0.17	0.06	0.05	0.30	0.55	0.06	0.46
Control Delay	21.9	11.7	16.1	23.5	0.2	13.9	21.9	11.7	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	11.7	16.1	23.5	0.2	13.9	21.9	11.7	23.2
Queue Length 50th (m)	23.3	5.3	6.6	3.3	0.0	5.8	21.2	2.0	33.0
Queue Length 95th (m)	40.2	18.9	14.5	9.2	0.0	m14.4	38.6	6.2	44.1
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	460	440	413	442	485	375	1036	356	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.32	0.17	0.06	0.05	0.30	0.55	0.06	0.46

Intersection Summary

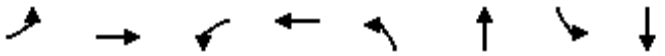
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	42	89	67	26	21	103	432	94	21	291	128
Future Volume (vph)	211	42	89	67	26	21	103	432	94	21	291	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1480		1491	1779	1484	1452	3121		1586	2800	
Flt Permitted	0.74	1.00		0.67	1.00	1.00	0.46	1.00		0.37	1.00	
Satd. Flow (perm)	1203	1480		1047	1779	1484	699	3121		612	2800	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	227	45	96	72	28	23	111	465	101	23	313	138
RTOR Reduction (vph)	0	72	0	0	0	17	0	23	0	0	63	0
Lane Group Flow (vph)	227	69	0	72	28	6	111	543	0	23	388	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Actuated g/C Ratio	0.34	0.25		0.34	0.25	0.25	0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	434	368		390	442	369	354	1014		337	910	
v/s Ratio Prot	c0.05	0.05		0.02	0.02		c0.03	c0.17		0.01	0.14	
v/s Ratio Perm	c0.13			0.05		0.00	0.10			0.02		
v/c Ratio	0.52	0.19		0.18	0.06	0.02	0.31	0.54		0.07	0.43	
Uniform Delay, d1	20.7	23.7		18.5	22.9	22.7	15.0	22.1		14.1	21.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.05	0.96		1.06	1.27	
Incremental Delay, d2	4.5	1.1		1.0	0.3	0.1	1.9	1.7		0.4	1.4	
Delay (s)	25.2	24.8		19.6	23.2	22.7	17.7	22.8		15.4	28.3	
Level of Service	C	C		B	C	C	B	C		B	C	
Approach Delay (s)		25.0			21.0			22.0			27.7	
Approach LOS		C			C			C			C	

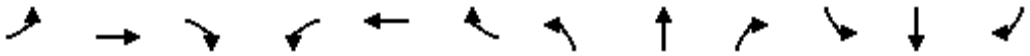
Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	29	93	145	9	685	134	383
v/c Ratio	0.03	0.04	0.22	0.23	0.02	0.67	0.49	0.39
Control Delay	14.2	12.5	21.4	6.4	10.9	26.2	18.7	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	12.5	21.4	6.4	10.9	26.2	18.7	13.2
Queue Length 50th (m)	1.4	1.9	9.2	1.4	0.7	45.0	7.0	13.3
Queue Length 95th (m)	4.7	6.5	23.1	13.8	2.8	60.2	21.6	20.8
Internal Link Dist (m)		260.4		114.4		57.6		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	490	669	422	628	395	1028	272	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.22	0.23	0.02	0.67	0.49	0.39

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	18	7	81	13	113	8	514	82	117	324	10
Future Volume (vph)	14	18	7	81	13	113	8	514	82	117	324	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.87		1.00	0.98		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)	1706	1713		1508	1514		1460	3119		1521	3043	
Flt Permitted	0.58	1.00		0.74	1.00		0.50	1.00		0.25	1.00	
Satd. Flow (perm)	1048	1713		1172	1514		764	3119		398	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	16	21	8	93	15	130	9	591	94	134	372	11
RTOR Reduction (vph)	0	5	0	0	83	0	0	16	0	0	3	0
Lane Group Flow (vph)	16	24	0	93	62	0	9	669	0	134	380	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.2	34.2		28.8	28.8		29.8	22.8		29.8	22.8	
Effective Green, g (s)	34.2	34.2		28.8	28.8		29.8	22.8		29.8	22.8	
Actuated g/C Ratio	0.43	0.43		0.36	0.36		0.37	0.29		0.37	0.29	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	459	732		421	545		345	888		246	867	
v/s Ratio Prot	0.00	c0.01			0.04		0.00	c0.21		c0.05	0.12	
v/s Ratio Perm	0.01			c0.08			0.01			0.16		
v/c Ratio	0.03	0.03		0.22	0.11		0.03	0.75		0.54	0.44	
Uniform Delay, d1	13.3	13.3		17.8	17.1		15.9	26.0		17.8	23.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.05	0.58	
Incremental Delay, d2	0.0	0.1		1.2	0.4		0.1	5.9		8.0	1.5	
Delay (s)	13.3	13.4		19.0	17.5		16.0	31.9		26.8	15.1	
Level of Service	B	B		B	B		B	C		C	B	
Approach Delay (s)		13.4			18.1			31.7			18.1	
Approach LOS		B			B			C			B	

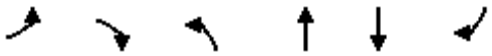
Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	16	624	4	9	330
Future Volume (Veh/h)	6	16	624	4	9	330
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	7	18	709	5	10	375
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1106	712			714	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1106	712			714	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	97	96			99	
cM capacity (veh/h)	216	426			895	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	25	714	10	375
Volume Left	7	0	10	0
Volume Right	18	5	0	0
cSH	335	1700	895	1700
Volume to Capacity	0.07	0.42	0.01	0.22
Queue Length 95th (m)	1.8	0.0	0.3	0.0
Control Delay (s)	16.6	0.0	9.1	0.0
Lane LOS	C		A	
Approach Delay (s)	16.6	0.0	0.2	
Approach LOS	C			

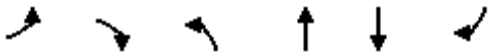
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	19	9	601	326	10
Future Volume (Veh/h)	22	19	9	601	326	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	25	22	10	683	370	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1073	370	381			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1073	370	381			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.4			
p0 queue free %	89	97	99			
cM capacity (veh/h)	234	646	1076			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	47	693	370	11
Volume Left	25	10	0	0
Volume Right	22	0	0	11
cSH	334	1076	1700	1700
Volume to Capacity	0.14	0.01	0.22	0.01
Queue Length 95th (m)	3.7	0.2	0.0	0.0
Control Delay (s)	17.5	0.2	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	17.5	0.2	0.0	
Approach LOS	C			

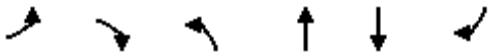
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	13	7	581	342	5
Future Volume (Veh/h)	19	13	7	581	342	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	21	14	8	638	376	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1032	378	381			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1032	378	381			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	91	98	99			
cM capacity (veh/h)	241	655	1189			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	35	646	381
Volume Left	21	8	0
Volume Right	14	0	5
cSH	323	1189	1700
Volume to Capacity	0.11	0.01	0.22
Queue Length 95th (m)	2.7	0.2	0.0
Control Delay (s)	17.5	0.2	0.0
Lane LOS	C	A	
Approach Delay (s)	17.5	0.2	0.0
Approach LOS	C		

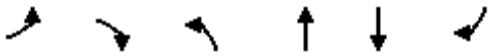
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	43	34	529	297	50
Future Volume (Veh/h)	56	43	34	529	297	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	47	37	575	323	54
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	999	350	377			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	999	350	377			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)						
tF (s)	3.6	3.5	2.4			
p0 queue free %	76	93	97			
cM capacity (veh/h)	250	657	1085			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	108	612	377
Volume Left	61	37	0
Volume Right	47	0	54
cSH	342	1085	1700
Volume to Capacity	0.32	0.03	0.22
Queue Length 95th (m)	10.1	0.8	0.0
Control Delay (s)	20.3	0.9	0.0
Lane LOS	C	A	
Approach Delay (s)	20.3	0.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	31	21	519	278	25
Future Volume (Veh/h)	31	31	21	519	278	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	33	33	22	552	296	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				378		
pX, platoon unblocked	0.90					
vC, conflicting volume	906	310	323			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	841	310	323			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	88	95	98			
cM capacity (veh/h)	281	712	1220			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	66	574	323
Volume Left	33	22	0
Volume Right	33	0	27
cSH	403	1220	1700
Volume to Capacity	0.16	0.02	0.19
Queue Length 95th (m)	4.4	0.4	0.0
Control Delay (s)	15.7	0.5	0.0
Lane LOS	C	A	
Approach Delay (s)	15.7	0.5	0.0
Approach LOS	C		

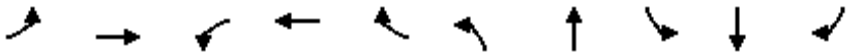
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	54	485	5	46	263
Future Volume (Veh/h)	8	54	485	5	46	263
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	9	59	533	5	51	289
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			254			
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	926	536			538	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831	374			377	
tC, single (s)	7.1	6.5			4.3	
tC, 2 stage (s)						
tF (s)	4.2	3.6			2.4	
p0 queue free %	96	89			95	
cM capacity (veh/h)	209	530			933	

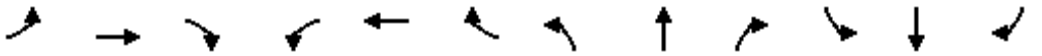
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	68	538	340
Volume Left	9	0	51
Volume Right	59	5	0
cSH	440	1700	933
Volume to Capacity	0.15	0.32	0.05
Queue Length 95th (m)	4.1	0.0	1.3
Control Delay (s)	14.7	0.0	1.9
Lane LOS	B		A
Approach Delay (s)	14.7	0.0	1.9
Approach LOS	B		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	134	190	9	76	27	33	395	43	161	90
v/c Ratio	0.34	0.45	0.03	0.32	0.09	0.06	0.53	0.10	0.20	0.12
Control Delay	21.2	26.9	17.6	34.8	0.6	10.1	22.2	10.3	16.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	26.9	17.6	34.8	0.6	10.1	22.2	10.3	16.6	0.6
Queue Length 50th (m)	15.1	21.3	0.9	11.1	0.0	2.0	45.8	2.7	11.8	0.0
Queue Length 95th (m)	27.2	48.3	3.8	22.9	0.0	7.6	90.8	9.1	35.6	1.1
Internal Link Dist (m)		208.9		217.2			306.0		230.2	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	403	620	431	684	642	582	746	435	793	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.31	0.02	0.11	0.04	0.06	0.53	0.10	0.20	0.12

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	130	45	8	70	25	30	341	22	40	148	83
Future Volume (vph)	123	130	45	8	70	25	30	341	22	40	148	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1515		1460	1455	1228	1472	1679		1508	1685	1361
Flt Permitted	0.56	1.00		0.64	1.00	1.00	0.66	1.00		0.41	1.00	1.00
Satd. Flow (perm)	964	1515		980	1455	1228	1015	1679		658	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	141	49	9	76	27	33	371	24	43	161	90
RTOR Reduction (vph)	0	12	0	0	0	22	0	2	0	0	0	50
Lane Group Flow (vph)	134	178	0	9	76	5	33	393	0	43	161	40
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	26.2	20.6		16.4	14.8	14.8	37.1	34.7		39.9	36.1	36.1
Effective Green, g (s)	26.2	20.6		16.4	14.8	14.8	37.1	34.7		39.9	36.1	36.1
Actuated g/C Ratio	0.32	0.25		0.20	0.18	0.18	0.45	0.42		0.49	0.44	0.44
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	368	380		205	262	221	472	709		359	740	598
v/s Ratio Prot	c0.03	c0.12		0.00	0.05		0.00	c0.23		c0.01	0.10	
v/s Ratio Perm	0.08			0.01		0.00	0.03			0.05		0.03
v/c Ratio	0.36	0.47		0.04	0.29	0.02	0.07	0.55		0.12	0.22	0.07
Uniform Delay, d1	20.8	26.1		26.5	29.1	27.7	12.6	17.9		11.6	14.2	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.9		0.1	0.6	0.0	0.1	3.1		0.2	0.7	0.2
Delay (s)	21.4	27.0		26.5	29.7	27.7	12.7	21.0		11.7	14.9	13.5
Level of Service	C	C		C	C	C	B	C		B	B	B
Approach Delay (s)		24.7			29.0			20.3			14.0	
Approach LOS		C			C			C			B	

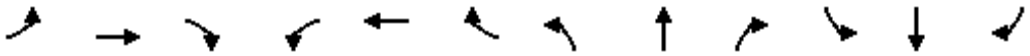
Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	82.1	Sum of lost time (s)	21.4
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	77	314	23	50	151
Future Volume (Veh/h)	6	77	314	23	50	151
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	6	82	334	24	53	161
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	613	346			358	
vC1, stage 1 conf vol	346					
vC2, stage 2 conf vol	267					
vCu, unblocked vol	613	346			358	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	88			96	
cM capacity (veh/h)	590	673			1179	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	6	82	358	53	161
Volume Left	6	0	0	53	0
Volume Right	0	82	24	0	0
cSH	590	673	1700	1179	1700
Volume to Capacity	0.01	0.12	0.21	0.04	0.09
Queue Length 95th (m)	0.2	3.1	0.0	1.1	0.0
Control Delay (s)	11.2	11.1	0.0	8.2	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.1		0.0	2.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	2	2	2	357	0	26	1	215	334	43	519	2
Future Volume (veh/h)	2	2	2	357	0	26	1	215	334	43	519	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	2	2	2	384	0	28	1	231	359	46	558	2
Approach Volume (veh/h)		6			412			591			606	
Crossing Volume (veh/h)		988			234			50			385	
High Capacity (veh/h)		629			1153			1332			1023	
High v/c (veh/h)		0.01			0.36			0.44			0.59	
Low Capacity (veh/h)		488			951			1113			834	
Low v/c (veh/h)		0.01			0.43			0.53			0.73	

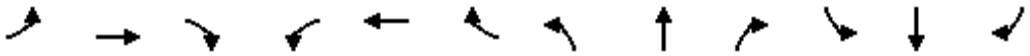
Intersection Summary				
Maximum v/c High	0.59			
Maximum v/c Low	0.73			
Intersection Capacity Utilization	96.0%	ICU Level of Service	F	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	46	108	38	26	500	113	80	864
v/c Ratio	0.07	0.06	0.19	0.06	0.16	0.78	0.17	0.41	0.66
Control Delay	17.1	9.4	17.8	8.2	6.7	16.3	0.8	22.4	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	9.4	17.8	8.2	6.7	16.3	0.8	22.4	21.9
Queue Length 50th (m)	3.4	1.3	9.9	0.5	0.7	14.9	0.0	9.0	57.2
Queue Length 95th (m)	11.2	8.6	25.4	7.0	m1.8	20.6	0.0	16.3	56.5
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	534	752	566	657	242	939	904	281	1907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.06	0.19	0.06	0.11	0.53	0.13	0.28	0.45

Intersection Summary

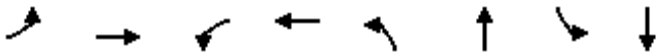
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	14	29	103	6	30	25	475	107	76	763	58
Future Volume (vph)	37	14	29	103	6	30	25	475	107	76	763	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1487	1578		1587	1373		1826	1597	1458	1615	3233	
Flt Permitted	0.73	1.00		0.73	1.00		0.22	1.00	1.00	0.28	1.00	
Satd. Flow (perm)	1147	1578		1215	1373		414	1597	1458	480	3233	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	39	15	31	108	6	32	26	500	113	80	803	61
RTOR Reduction (vph)	0	17	0	0	17	0	0	0	67	0	10	0
Lane Group Flow (vph)	39	29	0	108	21	0	26	500	46	80	854	0
Heavy Vehicles (%)	20%	7%	7%	15%	16%	17%	12%	15%	12%	13%	12%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	39.6	39.6		39.6	39.6		34.4	34.4	34.4	34.4	34.4	
Effective Green, g (s)	39.6	39.6		39.6	39.6		34.4	34.4	34.4	34.4	34.4	
Actuated g/C Ratio	0.47	0.47		0.47	0.47		0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	534	735		566	639		167	646	590	194	1308	
v/s Ratio Prot		0.02			0.02			c0.31			0.26	
v/s Ratio Perm	0.03			c0.09			0.06		0.03	0.17		
v/c Ratio	0.07	0.04		0.19	0.03		0.16	0.77	0.08	0.41	0.65	
Uniform Delay, d1	12.6	12.4		13.3	12.3		16.1	21.9	15.5	18.1	20.5	
Progression Factor	1.00	1.00		1.00	1.00		0.37	0.39	0.13	1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.7	0.1		1.8	8.2	0.2	6.4	2.6	
Delay (s)	12.8	12.5		14.1	12.4		7.9	16.7	2.2	24.4	23.0	
Level of Service	B	B		B	B		A	B	A	C	C	
Approach Delay (s)		12.6			13.6			13.8			23.1	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

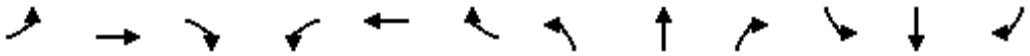
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	135	185	98	86	701	129	819
v/c Ratio	0.08	0.23	0.45	0.16	0.38	0.65	0.41	0.75
Control Delay	20.4	8.9	26.2	10.9	15.9	22.3	11.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	8.9	26.2	10.9	15.9	22.3	11.0	18.0
Queue Length 50th (m)	3.4	3.9	21.5	4.1	6.3	59.5	6.2	27.6
Queue Length 95th (m)	10.7	17.4	47.1	15.9	m9.3	74.3	11.1	33.3
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	420	587	408	624	226	1564	316	1590
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.23	0.45	0.16	0.38	0.45	0.41	0.52

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	37	91	176	39	54	82	537	129	123	727	51
Future Volume (vph)	32	37	91	176	39	54	82	537	129	123	727	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.91		1.00	0.97		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)	1534	1408		1544	1569		1337	2981		1616	3068	
Flt Permitted	0.69	1.00		0.67	1.00		0.22	1.00		0.28	1.00	
Satd. Flow (perm)	1120	1408		1090	1569		305	2981		483	3068	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	34	39	96	185	41	57	86	565	136	129	765	54
RTOR Reduction (vph)	0	60	0	0	36	0	0	33	0	0	8	0
Lane Group Flow (vph)	34	75	0	185	62	0	86	668	0	129	811	0
Heavy Vehicles (%)	19%	8%	20%	13%	10%	13%	26%	15%	8%	8%	15%	18%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.9	31.9		31.9	31.9		37.0	30.0		37.0	30.0	
Effective Green, g (s)	31.9	31.9		31.9	31.9		37.0	30.0		37.0	30.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.44	0.35		0.44	0.35	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	420	528		409	588		217	1052		303	1082	
v/s Ratio Prot		0.05			0.04		0.03	0.22		c0.04	c0.26	
v/s Ratio Perm	0.03			c0.17			0.14			0.15		
v/c Ratio	0.08	0.14		0.45	0.11		0.40	0.63		0.43	0.75	
Uniform Delay, d1	17.1	17.5		20.0	17.3		15.4	22.9		15.2	24.2	
Progression Factor	1.00	1.00		1.00	1.00		1.13	0.94		0.71	0.58	
Incremental Delay, d2	0.4	0.6		3.6	0.4		4.9	2.7		4.0	4.4	
Delay (s)	17.5	18.1		23.6	17.6		22.3	24.3		14.9	18.5	
Level of Service	B	B		C	B		C	C		B	B	
Approach Delay (s)		18.0			21.5			24.1			18.0	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

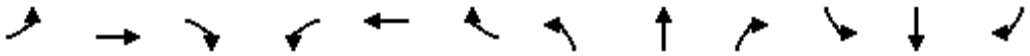
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	256	239	192	111	33	125	531	34	993
v/c Ratio	0.60	0.56	0.57	0.27	0.07	0.62	0.47	0.08	0.91
Control Delay	27.6	22.3	27.2	28.7	0.3	35.4	32.5	18.6	52.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	22.3	27.2	28.7	0.3	35.4	32.5	18.6	52.5
Queue Length 50th (m)	30.0	19.2	21.6	14.8	0.0	18.8	44.1	4.4	85.0
Queue Length 95th (m)	49.9	42.2	37.5	28.4	0.0	#35.8	58.6	m8.2	#112.4
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	429	424	336	416	462	200	1166	411	1121
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.56	0.57	0.27	0.07	0.63	0.46	0.08	0.89

Intersection Summary

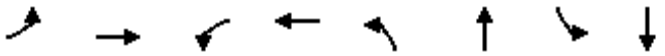
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	82	149	186	108	32	121	415	100	33	674	289
Future Volume (vph)	248	82	149	186	108	32	121	415	100	33	674	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1560	1487		1531	1779	1498	1465	3131		1694	2921	
Flt Permitted	0.69	1.00		0.48	1.00	1.00	0.14	1.00		0.40	1.00	
Satd. Flow (perm)	1126	1487		772	1779	1498	209	3131		712	2921	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	256	85	154	192	111	33	125	428	103	34	695	298
RTOR Reduction (vph)	0	77	0	0	0	25	0	25	0	0	57	0
Lane Group Flow (vph)	256	162	0	192	111	8	125	506	0	34	936	0
Heavy Vehicles (%)	17%	18%	16%	14%	8%	9%	15%	13%	14%	3%	15%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	27.7	19.9		27.7	19.9	19.9	37.2	30.2		37.2	30.2	
Effective Green, g (s)	27.7	19.9		27.7	19.9	19.9	37.2	30.2		37.2	30.2	
Actuated g/C Ratio	0.33	0.23		0.33	0.23	0.23	0.44	0.36		0.44	0.36	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	406	348		321	416	350	194	1112		392	1037	
v/s Ratio Prot	c0.06	0.11		0.05	0.06		c0.05	0.16		0.01	c0.32	
v/s Ratio Perm	c0.15			0.14		0.01	0.23			0.03		
v/c Ratio	0.63	0.47		0.60	0.27	0.02	0.64	0.45		0.09	0.90	
Uniform Delay, d1	23.3	28.0		22.4	26.6	25.1	16.8	21.1		13.8	26.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.80	1.60		1.80	1.73	
Incremental Delay, d2	7.3	4.4		8.0	1.6	0.1	13.9	1.2		0.4	11.4	
Delay (s)	30.5	32.4		30.4	28.2	25.2	44.2	34.9		25.2	56.5	
Level of Service	C	C		C	C	C	D	C		C	E	
Approach Delay (s)		31.5			29.1			36.7			55.5	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

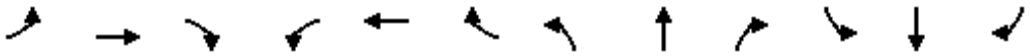
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	48	201	158	21	618	154	917
v/c Ratio	0.05	0.08	0.48	0.27	0.10	0.57	0.46	0.84
Control Delay	16.4	12.3	30.1	7.9	11.4	23.7	11.4	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	12.3	30.1	7.9	11.4	23.7	11.4	26.5
Queue Length 50th (m)	1.9	2.9	23.8	1.9	1.6	39.6	6.4	74.0
Queue Length 95th (m)	6.2	9.7	#57.8	17.0	4.9	54.7	m11.1	m91.4
Internal Link Dist (m)		260.4		114.4		57.6		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	441	612	423	584	202	1159	333	1153
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.08	0.48	0.27	0.10	0.53	0.46	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	27	19	195	18	135	20	508	91	149	864	25
Future Volume (vph)	19	27	19	195	18	135	20	508	91	149	864	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.98		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)	1573	1557		1659	1473		1448	3133		1644	3157	
Flt Permitted	0.58	1.00		0.73	1.00		0.15	1.00		0.31	1.00	
Satd. Flow (perm)	953	1557		1267	1473		228	3133		539	3157	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	20	28	20	201	19	139	21	524	94	154	891	26
RTOR Reduction (vph)	0	12	0	0	93	0	0	18	0	0	3	0
Lane Group Flow (vph)	20	36	0	201	65	0	21	600	0	154	914	0
Heavy Vehicles (%)	16%	19%	11%	10%	0%	15%	26%	14%	13%	11%	15%	20%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.2	35.2		28.4	28.4		33.8	26.8		33.8	26.8	
Effective Green, g (s)	35.2	35.2		28.4	28.4		33.8	26.8		33.8	26.8	
Actuated g/C Ratio	0.41	0.41		0.33	0.33		0.40	0.32		0.40	0.32	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	415	644		423	492		191	987		305	995	
v/s Ratio Prot	0.00	c0.02			0.04		0.01	0.19		c0.04	c0.29	
v/s Ratio Perm	0.02			c0.16			0.03			0.16		
v/c Ratio	0.05	0.06		0.48	0.13		0.11	0.61		0.50	0.92	
Uniform Delay, d1	14.9	14.9		22.4	19.7		17.1	24.6		17.4	28.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.71	0.82	
Incremental Delay, d2	0.0	0.2		3.8	0.6		1.2	2.8		3.7	10.1	
Delay (s)	14.9	15.1		26.2	20.3		18.2	27.4		16.1	33.2	
Level of Service	B	B		C	C		B	C		B	C	
Approach Delay (s)		15.0			23.6			27.1			30.7	
Approach LOS		B			C			C			C	

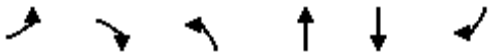
Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	17	591	10	23	953
Future Volume (Veh/h)	8	17	591	10	23	953
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	8	18	616	10	24	993
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1662	621			626	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1662	621			626	
tC, single (s)	6.5	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	92	96			97	
cM capacity (veh/h)	98	480			946	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	26	626	24	993
Volume Left	8	0	24	0
Volume Right	18	10	0	0
cSH	219	1700	946	1700
Volume to Capacity	0.12	0.37	0.03	0.58
Queue Length 95th (m)	3.0	0.0	0.6	0.0
Control Delay (s)	23.6	0.0	8.9	0.0
Lane LOS	C		A	
Approach Delay (s)	23.6	0.0	0.2	
Approach LOS	C			

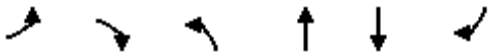
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	39	26	571	907	49
Future Volume (Veh/h)	22	39	26	571	907	49
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	23	41	27	601	955	52
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1610	955	1007			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1610	955	1007			
tC, single (s)	6.6	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.7	3.4	2.5			
p0 queue free %	77	86	95			
cM capacity (veh/h)	100	295	596			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	64	628	955	52
Volume Left	23	27	0	0
Volume Right	41	0	0	52
cSH	174	596	1700	1700
Volume to Capacity	0.37	0.05	0.56	0.03
Queue Length 95th (m)	12.0	1.1	0.0	0.0
Control Delay (s)	37.4	1.2	0.0	0.0
Lane LOS	E	A		
Approach Delay (s)	37.4	1.2	0.0	
Approach LOS	E			

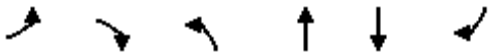
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	11	15	573	901	34
Future Volume (Veh/h)	26	11	15	573	901	34
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	28	12	16	616	969	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1636	988	1006			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1636	988	1006			
tC, single (s)	6.5	6.2	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.5			
p0 queue free %	73	96	97			
cM capacity (veh/h)	104	303	596			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	40	632	1006
Volume Left	28	16	0
Volume Right	12	0	37
cSH	130	596	1700
Volume to Capacity	0.31	0.03	0.59
Queue Length 95th (m)	9.2	0.6	0.0
Control Delay (s)	44.6	0.7	0.0
Lane LOS	E	A	
Approach Delay (s)	44.6	0.7	0.0
Approach LOS	E		

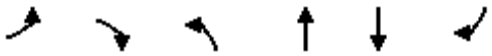
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	63	59	51	528	772	126
Future Volume (Veh/h)	63	59	51	528	772	126
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	66	61	53	550	804	131
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1526	870	935			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1526	870	935			
tC, single (s)	6.5	6.4	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.5	2.3			
p0 queue free %	41	81	92			
cM capacity (veh/h)	112	327	701			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	127	603	935
Volume Left	66	53	0
Volume Right	61	0	131
cSH	164	701	1700
Volume to Capacity	0.78	0.08	0.55
Queue Length 95th (m)	37.9	1.9	0.0
Control Delay (s)	77.8	2.0	0.0
Lane LOS	F	A	
Approach Delay (s)	77.8	2.0	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	53	39	529	792	38
Future Volume (Veh/h)	27	53	39	529	792	38
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	28	54	40	540	808	39
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				378		
pX, platoon unblocked	0.94					
vC, conflicting volume	1448	828	847			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1444	828	847			
tC, single (s)	6.4	6.3	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	78	85	95			
cM capacity (veh/h)	128	361	733			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	82	580	847
Volume Left	28	40	0
Volume Right	54	0	39
cSH	223	733	1700
Volume to Capacity	0.37	0.05	0.50
Queue Length 95th (m)	12.2	1.3	0.0
Control Delay (s)	30.3	1.5	0.0
Lane LOS	D	A	
Approach Delay (s)	30.3	1.5	0.0
Approach LOS	D		

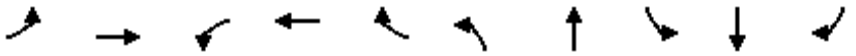
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	83	484	9	81	760
Future Volume (Veh/h)	5	83	484	9	81	760
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	5	85	494	9	83	776
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			254			
pX, platoon unblocked	0.88	0.88			0.88	
vC, conflicting volume	1440	498			503	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1432	360			365	
tC, single (s)	6.6	6.3			4.3	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.4	
p0 queue free %	95	85			91	
cM capacity (veh/h)	108	584			967	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	90	503	859
Volume Left	5	0	83
Volume Right	85	9	0
cSH	469	1700	967
Volume to Capacity	0.19	0.30	0.09
Queue Length 95th (m)	5.3	0.0	2.1
Control Delay (s)	14.5	0.0	2.2
Lane LOS	B		A
Approach Delay (s)	14.5	0.0	2.2
Approach LOS	B		

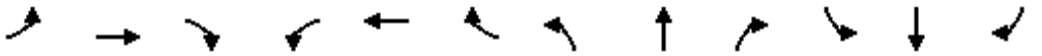
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	144	224	45	132	59	30	330	99	502	186
v/c Ratio	0.35	0.55	0.11	0.44	0.17	0.08	0.52	0.21	0.67	0.25
Control Delay	21.1	29.9	17.9	36.0	1.1	11.9	25.2	12.5	27.2	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	29.9	17.9	36.0	1.1	11.9	25.2	12.5	27.2	6.1
Queue Length 50th (m)	16.3	28.5	4.8	19.8	0.0	2.2	41.9	7.7	56.5	2.2
Queue Length 95th (m)	28.9	51.7	11.3	35.7	0.1	7.3	77.0	18.1	#140.9	17.5
Internal Link Dist (m)		208.9		217.2			306.0		230.2	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	413	561	491	682	641	362	634	474	753	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.40	0.09	0.19	0.09	0.08	0.52	0.21	0.67	0.25

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	112	106	44	128	57	29	296	24	96	487	180
Future Volume (vph)	140	112	106	44	128	57	29	296	24	96	487	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1483		1601	1628	1361	1560	1597		1674	1685	1445
Flt Permitted	0.55	1.00		0.62	1.00	1.00	0.34	1.00		0.44	1.00	1.00
Satd. Flow (perm)	946	1483		1042	1628	1361	565	1597		779	1685	1445
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	144	115	109	45	132	59	30	305	25	99	502	186
RTOR Reduction (vph)	0	34	0	0	0	47	0	2	0	0	0	91
Lane Group Flow (vph)	144	190	0	45	132	12	30	328	0	99	502	95
Heavy Vehicles (%)	11%	22%	18%	14%	18%	20%	17%	18%	30%	9%	14%	13%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	31.0	21.4		23.0	17.4	17.4	37.5	35.0		43.3	37.9	37.9
Effective Green, g (s)	31.0	21.4		23.0	17.4	17.4	37.5	35.0		43.3	37.9	37.9
Actuated g/C Ratio	0.35	0.24		0.26	0.20	0.20	0.42	0.39		0.49	0.43	0.43
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	405	357		305	319	266	266	629		434	719	616
v/s Ratio Prot	c0.04	c0.13		0.01	0.08		0.00	0.21		c0.01	c0.30	
v/s Ratio Perm	0.09			0.03		0.01	0.04			0.10		0.07
v/c Ratio	0.36	0.53		0.15	0.41	0.04	0.11	0.52		0.23	0.70	0.15
Uniform Delay, d1	20.7	29.3		25.1	31.2	29.0	15.7	20.5		12.8	20.8	15.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	1.5		0.2	0.9	0.1	0.2	3.1		0.3	5.6	0.5
Delay (s)	21.3	30.9		25.3	32.1	29.0	15.9	23.6		13.1	26.3	16.1
Level of Service	C	C		C	C	C	B	C		B	C	B
Approach Delay (s)		27.1			30.0			22.9			22.3	
Approach LOS		C			C			C			C	

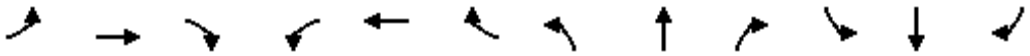
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	21.4
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	59	289	49	231	402
Future Volume (Veh/h)	14	59	289	49	231	402
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	15	63	311	53	248	432
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)						330
pX, platoon unblocked	0.99					
vC, conflicting volume	1266	338			364	
vC1, stage 1 conf vol	338					
vC2, stage 2 conf vol	928					
vCu, unblocked vol	1263	338			364	
tC, single (s)	6.5	6.4			4.2	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4			2.3	
p0 queue free %	95	91			78	
cM capacity (veh/h)	279	676			1147	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	15	63	364	248	432
Volume Left	15	0	0	248	0
Volume Right	0	63	53	0	0
cSH	279	676	1700	1147	1700
Volume to Capacity	0.05	0.09	0.21	0.22	0.25
Queue Length 95th (m)	1.3	2.3	0.0	6.2	0.0
Control Delay (s)	18.6	10.9	0.0	9.0	0.0
Lane LOS	C	B		A	
Approach Delay (s)	12.4		0.0	3.3	
Approach LOS	B				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	2	3	6	357	2	40	9	335	481	29	269	2
Future Volume (veh/h)	2	3	6	357	2	40	9	335	481	29	269	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	3	6	376	2	42	9	353	506	31	283	2
Approach Volume (veh/h)		11			420			868			316	
Crossing Volume (veh/h)		690			364			36			387	
High Capacity (veh/h)		801			1040			1346			1021	
High v/c (veh/h)		0.01			0.40			0.64			0.31	
Low Capacity (veh/h)		638			850			1126			833	
Low v/c (veh/h)		0.02			0.49			0.77			0.38	

Intersection Summary				
Maximum v/c High	0.64			
Maximum v/c Low	0.77			
Intersection Capacity Utilization	84.8%	ICU Level of Service	E	

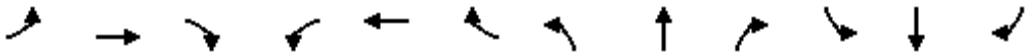


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	27	51	72	30	838	117	57	727
v/c Ratio	0.12	0.05	0.13	0.16	0.08	0.95	0.14	0.46	0.43
Control Delay	21.7	9.6	21.6	7.1	2.4	26.3	0.4	25.3	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0
Total Delay	21.7	9.6	21.6	7.1	2.4	39.3	0.4	25.3	11.2
Queue Length 50th (m)	4.3	0.3	5.6	0.3	0.4	35.5	0.0	4.7	30.1
Queue Length 95th (m)	11.3	5.7	13.6	9.0	m0.7	#193.7	m0.0	17.6	42.1
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	329	523	402	451	389	898	822	126	1711
Starvation Cap Reductn	0	0	0	0	0	69	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.05	0.13	0.16	0.08	1.01	0.14	0.45	0.42

Intersection Summary

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

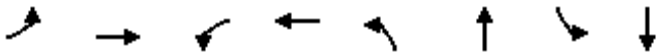
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	3	23	48	3	65	28	788	110	54	643	40
Future Volume (vph)	37	3	23	48	3	65	28	788	110	54	643	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1628		1659	1299		1948	1597	1372	1484	3033	
Flt Permitted	0.71	1.00		0.74	1.00		0.34	1.00	1.00	0.14	1.00	
Satd. Flow (perm)	1059	1628		1292	1299		693	1597	1372	225	3033	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	39	3	24	51	3	69	30	838	117	57	684	43
RTOR Reduction (vph)	0	17	0	0	48	0	0	0	53	0	6	0
Lane Group Flow (vph)	39	10	0	51	24	0	30	838	64	57	721	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	24.9	24.9		24.9	24.9		44.1	44.1	44.1	44.1	44.1	
Effective Green, g (s)	24.9	24.9		24.9	24.9		44.1	44.1	44.1	44.1	44.1	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	329	506		402	404		382	880	756	124	1671	
v/s Ratio Prot		0.01			0.02			c0.52			0.24	
v/s Ratio Perm	0.04			c0.04			0.04		0.05	0.25		
v/c Ratio	0.12	0.02		0.13	0.06		0.08	0.95	0.09	0.46	0.43	
Uniform Delay, d1	19.7	19.1		19.8	19.3		8.4	17.0	8.5	10.8	10.6	
Progression Factor	1.00	1.00		1.00	1.00		0.26	0.37	0.05	1.00	1.00	
Incremental Delay, d2	0.7	0.1		0.6	0.3		0.3	17.2	0.2	11.8	0.8	
Delay (s)	20.4	19.2		20.4	19.6		2.5	23.5	0.6	22.6	11.4	
Level of Service	C	B		C	B		A	C	A	C	B	
Approach Delay (s)		19.9			19.9			20.2			12.2	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

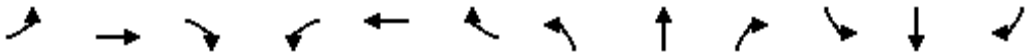
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	49	87	80	111	1020	115	630
v/c Ratio	0.09	0.10	0.27	0.16	0.27	0.81	0.45	0.51
Control Delay	24.2	12.2	27.1	11.6	4.6	19.1	18.8	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	12.2	27.1	11.6	4.6	19.1	18.8	13.5
Queue Length 50th (m)	3.8	1.4	10.3	2.5	2.1	69.5	6.9	21.9
Queue Length 95th (m)	11.2	9.6	24.0	13.2	m2.6	m89.1	19.1	25.3
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	378	476	322	489	405	1453	257	1437
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.10	0.27	0.16	0.27	0.70	0.45	0.44

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	12	34	82	22	54	104	835	124	108	550	42
Future Volume (vph)	32	12	34	82	22	54	104	835	124	108	550	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.89		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)	1738	1540		1442	1532		1574	2957		1544	2943	
Flt Permitted	0.70	1.00		0.73	1.00		0.36	1.00		0.17	1.00	
Satd. Flow (perm)	1290	1540		1101	1532		598	2957		273	2943	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	13	36	87	23	57	111	888	132	115	585	45
RTOR Reduction (vph)	0	25	0	0	40	0	0	17	0	0	8	0
Lane Group Flow (vph)	34	24	0	87	40	0	111	1003	0	115	622	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.4	23.4		23.4	23.4		40.5	33.5		40.5	33.5	
Effective Green, g (s)	23.4	23.4		23.4	23.4		40.5	33.5		40.5	33.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.51	0.42		0.51	0.42	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	377	450		322	448		388	1238		249	1232	
v/s Ratio Prot		0.02			0.03		0.03	c0.34		c0.04	0.21	
v/s Ratio Perm	0.03			c0.08			0.12			0.19		
v/c Ratio	0.09	0.05		0.27	0.09		0.29	0.81		0.46	0.50	
Uniform Delay, d1	20.6	20.3		21.7	20.6		10.6	20.5		12.1	17.1	
Progression Factor	1.00	1.00		1.00	1.00		0.54	0.79		1.99	0.74	
Incremental Delay, d2	0.5	0.2		2.1	0.4		1.1	3.6		5.7	1.4	
Delay (s)	21.0	20.6		23.8	20.9		6.8	19.8		29.7	14.1	
Level of Service	C	C		C	C		A	B		C	B	
Approach Delay (s)		20.8			22.4			18.5			16.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

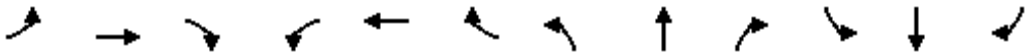


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	351	218	112	43	34	171	874	34	697
v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.62	0.84	0.14	0.72
Control Delay	34.2	15.0	18.0	23.9	0.3	27.2	32.9	10.3	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	15.0	18.0	23.9	0.3	27.2	32.9	10.3	27.4
Queue Length 50th (m)	39.8	11.1	10.6	5.0	0.0	15.4	48.0	2.7	54.5
Queue Length 95th (m)	#75.1	30.1	20.9	12.6	0.0	m18.8	m50.3	m5.5	70.6
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	455	463	359	442	485	276	1036	241	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.62	0.84	0.14	0.72

Intersection Summary

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

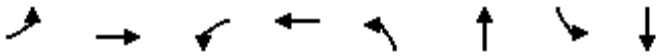
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	326	65	138	104	40	32	159	668	145	32	450	198
Future Volume (vph)	326	65	138	104	40	32	159	668	145	32	450	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1481		1491	1779	1484	1452	3121		1586	2800	
Flt Permitted	0.73	1.00		0.54	1.00	1.00	0.28	1.00		0.17	1.00	
Satd. Flow (perm)	1187	1481		850	1779	1484	422	3121		289	2800	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	351	70	148	112	43	34	171	718	156	34	484	213
RTOR Reduction (vph)	0	95	0	0	0	26	0	23	0	0	62	0
Lane Group Flow (vph)	351	123	0	112	43	8	171	851	0	34	635	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Actuated g/C Ratio	0.34	0.25		0.34	0.25	0.25	0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	368		341	442	369	264	1014		232	910	
v/s Ratio Prot	c0.07	0.08		0.03	0.02		c0.06	c0.27		0.01	0.23	
v/s Ratio Perm	c0.20			0.08		0.01	0.21			0.05		
v/c Ratio	0.82	0.33		0.33	0.10	0.02	0.65	0.84		0.15	0.70	
Uniform Delay, d1	23.5	24.6		19.1	23.1	22.7	16.1	25.1		15.1	23.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.71	1.17		0.85	1.11	
Incremental Delay, d2	15.6	2.4		2.6	0.4	0.1	5.3	3.8		1.2	4.2	
Delay (s)	39.1	27.0		21.7	23.6	22.8	32.8	33.2		14.0	30.3	
Level of Service	D	C		C	C	C	C	C		B	C	
Approach Delay (s)		34.5			22.3			33.2			29.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



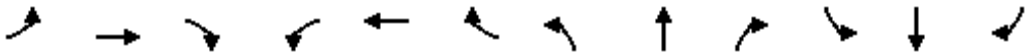
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	45	144	224	14	1060	208	593
v/c Ratio	0.06	0.07	0.38	0.35	0.05	1.03	0.92	0.60
Control Delay	14.5	12.4	26.2	6.9	11.2	64.0	63.5	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	12.4	26.2	6.9	11.2	64.0	63.5	20.8
Queue Length 50th (m)	2.2	3.0	14.9	2.1	1.1	~90.8	22.8	25.9
Queue Length 95th (m)	6.3	8.7	34.5	17.2	3.7	#121.2	m#46.7	41.7
Internal Link Dist (m)		260.4		114.4		57.6		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	444	670	384	637	301	1029	227	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.07	0.38	0.35	0.05	1.03	0.92	0.60

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	28	11	125	20	175	12	795	127	181	501	15
Future Volume (vph)	22	28	11	125	20	175	12	795	127	181	501	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.87		1.00	0.98		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)	1706	1708		1508	1514		1460	3119		1521	3043	
Flt Permitted	0.51	1.00		0.73	1.00		0.32	1.00		0.17	1.00	
Satd. Flow (perm)	908	1708		1155	1514		495	3119		271	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	25	32	13	144	23	201	14	914	146	208	576	17
RTOR Reduction (vph)	0	8	0	0	134	0	0	17	0	0	3	0
Lane Group Flow (vph)	25	37	0	144	90	0	14	1043	0	208	590	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Effective Green, g (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Actuated g/C Ratio	0.42	0.42		0.33	0.33		0.38	0.30		0.38	0.30	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	407	713		384	503		273	920		213	897	
v/s Ratio Prot	0.00	c0.02			0.06		0.00	c0.33		c0.09	0.19	
v/s Ratio Perm	0.02			c0.12			0.02			0.29		
v/c Ratio	0.06	0.05		0.38	0.18		0.05	1.13		0.98	0.66	
Uniform Delay, d1	14.0	13.9		20.4	18.9		15.6	28.2		21.8	24.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.71	0.81	
Incremental Delay, d2	0.0	0.1		2.8	0.8		0.4	73.7		50.6	3.2	
Delay (s)	14.0	14.0		23.1	19.7		16.0	101.9		88.0	23.2	
Level of Service	B	B		C	B		B	F		F	C	
Approach Delay (s)		14.0			21.1			100.8			40.0	
Approach LOS		B			C			F			D	

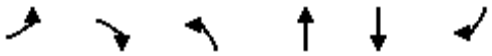
Intersection Summary			
HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	25	965	6	14	510
Future Volume (Veh/h)	9	25	965	6	14	510
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	28	1097	7	16	580
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1712	1100			1104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1712	1100			1104	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	89	89			97	
cM capacity (veh/h)	90	253			640	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	38	1104	16	580
Volume Left	10	0	16	0
Volume Right	28	7	0	0
cSH	171	1700	640	1700
Volume to Capacity	0.22	0.65	0.03	0.34
Queue Length 95th (m)	6.2	0.0	0.6	0.0
Control Delay (s)	32.0	0.0	10.8	0.0
Lane LOS	D		B	
Approach Delay (s)	32.0	0.0	0.3	
Approach LOS	D			

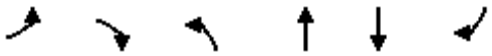
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	29	14	929	504	15
Future Volume (Veh/h)	34	29	14	929	504	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	39	33	16	1056	573	17
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1661	573	590			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1661	573	590			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.4			
p0 queue free %	61	93	98			
cM capacity (veh/h)	101	493	894			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	72	1072	573	17
Volume Left	39	16	0	0
Volume Right	33	0	0	17
cSH	159	894	1700	1700
Volume to Capacity	0.45	0.02	0.34	0.01
Queue Length 95th (m)	15.8	0.4	0.0	0.0
Control Delay (s)	45.1	0.6	0.0	0.0
Lane LOS	E	A		
Approach Delay (s)	45.1	0.6	0.0	
Approach LOS	E			

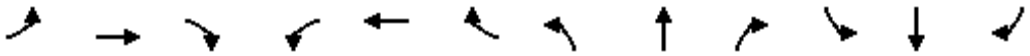
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	20	11	898	529	8
Future Volume (Veh/h)	29	20	11	898	529	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	32	22	12	987	581	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1596	586	590			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1596	586	590			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	70	96	99			
cM capacity (veh/h)	107	499	995			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	999	590
Volume Left	32	12	0
Volume Right	22	0	9
cSH	158	995	1700
Volume to Capacity	0.34	0.01	0.35
Queue Length 95th (m)	10.7	0.3	0.0
Control Delay (s)	39.2	0.3	0.0
Lane LOS	E	A	
Approach Delay (s)	39.2	0.3	0.0
Approach LOS	E		

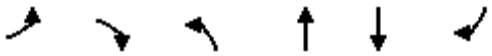
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	0	66	0	0	0	53	818	0	0	459	77
Future Volume (Veh/h)	87	0	66	0	0	0	53	818	0	0	459	77
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	0	72	0	0	0	58	889	0	0	499	84
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1546	1546	541	1618	1588	889	583			889		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1546	1546	541	1618	1588	889	583			889		
tC, single (s)	7.2	6.5	6.4	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	0	100	86	100	100	100	94			100		
cM capacity (veh/h)	84	107	510	68	101	342	904			762		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	167	0	947	583
Volume Left	95	0	58	0
Volume Right	72	0	0	84
cSH	131	1700	904	762
Volume to Capacity	1.27	0.00	0.06	0.00
Queue Length 95th (m)	79.4	0.0	1.6	0.0
Control Delay (s)	232.9	0.0	1.7	0.0
Lane LOS	F	A	A	
Approach Delay (s)	232.9	0.0	1.7	0.0
Approach LOS	F	A		

Intersection Summary				
Average Delay	23.9			
Intersection Capacity Utilization	93.7%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	48	32	802	430	39
Future Volume (Veh/h)	48	48	32	802	430	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	51	51	34	853	457	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				378		
pX, platoon unblocked	0.69					
vC, conflicting volume	1398	478	498			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1353	478	498			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	51	91	97			
cM capacity (veh/h)	103	572	1051			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	102	887	498
Volume Left	51	34	0
Volume Right	51	0	41
cSH	175	1051	1700
Volume to Capacity	0.58	0.03	0.29
Queue Length 95th (m)	23.8	0.8	0.0
Control Delay (s)	51.0	0.9	0.0
Lane LOS	F	A	
Approach Delay (s)	51.0	0.9	0.0
Approach LOS	F		

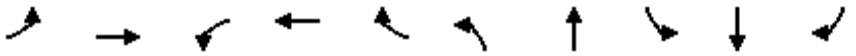
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	83	750	8	71	407
Future Volume (Veh/h)	12	83	750	8	71	407
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	91	824	9	78	447
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			254			
pX, platoon unblocked	0.61	0.61			0.61	
vC, conflicting volume	1432	828			833	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1388	398			405	
tC, single (s)	7.1	6.5			4.3	
tC, 2 stage (s)						
tF (s)	4.2	3.6			2.4	
p0 queue free %	78	75			88	
cM capacity (veh/h)	59	365			647	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	104	833	525
Volume Left	13	0	78
Volume Right	91	9	0
cSH	222	1700	647
Volume to Capacity	0.47	0.49	0.12
Queue Length 95th (m)	17.5	0.0	3.1
Control Delay (s)	34.9	0.0	3.3
Lane LOS	D		A
Approach Delay (s)	34.9	0.0	3.3
Approach LOS	D		

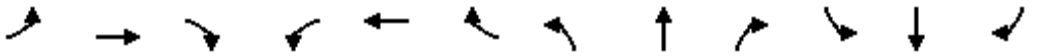
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	207	294	13	117	42	50	610	67	249	139
v/c Ratio	0.51	0.67	0.04	0.45	0.13	0.09	0.87	0.25	0.33	0.20
Control Delay	24.7	33.4	16.9	37.1	0.8	11.9	40.7	14.0	20.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	33.4	16.9	37.1	0.8	11.9	40.7	14.0	20.8	3.7
Queue Length 50th (m)	24.5	37.2	1.4	17.6	0.0	3.3	89.1	4.5	27.4	0.0
Queue Length 95th (m)	39.9	76.0	4.6	32.2	0.0	11.8	#204.2	14.8	61.2	9.9
Internal Link Dist (m)		208.9		217.2			306.0		230.2	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	406	585	418	645	612	533	703	263	749	694
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.50	0.03	0.18	0.07	0.09	0.87	0.25	0.33	0.20

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	201	70	12	108	39	46	527	34	62	229	128
Future Volume (vph)	190	201	70	12	108	39	46	527	34	62	229	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1514		1460	1455	1228	1472	1679		1508	1685	1361
Flt Permitted	0.53	1.00		0.58	1.00	1.00	0.60	1.00		0.19	1.00	1.00
Satd. Flow (perm)	910	1514		892	1455	1228	937	1679		294	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	218	76	13	117	42	50	573	37	67	249	139
RTOR Reduction (vph)	0	12	0	0	0	35	0	2	0	0	0	80
Lane Group Flow (vph)	207	282	0	13	117	7	50	608	0	67	249	59
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	28.8	23.2		15.1	13.5	13.5	38.8	35.0		41.6	36.4	36.4
Effective Green, g (s)	28.8	23.2		15.1	13.5	13.5	38.8	35.0		41.6	36.4	36.4
Actuated g/C Ratio	0.33	0.27		0.17	0.16	0.16	0.45	0.41		0.48	0.42	0.42
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	399	406		166	227	191	444	680		214	709	573
v/s Ratio Prot	c0.07	c0.19		0.00	0.08		0.00	c0.36		c0.02	0.15	
v/s Ratio Perm	0.10			0.01		0.01	0.05			0.13		0.04
v/c Ratio	0.52	0.70		0.08	0.52	0.03	0.11	0.89		0.31	0.35	0.10
Uniform Delay, d1	22.1	28.4		29.7	33.4	30.9	13.6	24.0		14.9	17.0	15.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	5.1		0.2	2.0	0.1	0.1	16.6		0.8	1.4	0.4
Delay (s)	23.2	33.5		29.9	35.4	31.0	13.7	40.6		15.8	18.3	15.5
Level of Service	C	C		C	D	C	B	D		B	B	B
Approach Delay (s)		29.3			33.9			38.6			17.1	
Approach LOS		C			C			D			B	

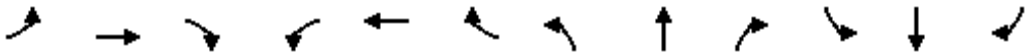
Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	21.4
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	119	485	36	77	233
Future Volume (Veh/h)	9	119	485	36	77	233
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	127	516	38	82	248
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	947	535			554	
vC1, stage 1 conf vol	535					
vC2, stage 2 conf vol	412					
vCu, unblocked vol	947	535			554	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	98	76			92	
cM capacity (veh/h)	454	524			996	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	10	127	554	82	248
Volume Left	10	0	0	82	0
Volume Right	0	127	38	0	0
cSH	454	524	1700	996	1700
Volume to Capacity	0.02	0.24	0.33	0.08	0.15
Queue Length 95th (m)	0.5	7.1	0.0	2.0	0.0
Control Delay (s)	13.1	14.0	0.0	8.9	0.0
Lane LOS	B	B		A	
Approach Delay (s)	14.0		0.0	2.2	
Approach LOS	B				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	3	3	552	0	40	2	332	516	66	802	3
Future Volume (veh/h)	3	3	3	552	0	40	2	332	516	66	802	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	3	3	594	0	43	2	357	555	71	862	3
Approach Volume (veh/h)		9			637			914			936	
Crossing Volume (veh/h)		1527#			362			77			596	
High Capacity (veh/h)		402			1042			1304			864	
High v/c (veh/h)		0.02			0.61			0.70			1.08	
Low Capacity (veh/h)		297			851			1088			693	
Low v/c (veh/h)		0.03			0.75			0.84			1.35	

Intersection Summary				
Maximum v/c High	1.08			
Maximum v/c Low	1.35			
Intersection Capacity Utilization	139.9%	ICU Level of Service	H	
# Crossing flow exceeds 1200, method is not applicable				

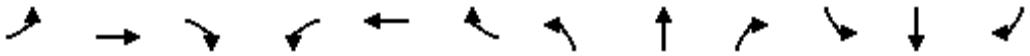


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	70	167	57	41	773	174	123	1337
v/c Ratio	0.17	0.13	0.44	0.12	0.32	0.88	0.20	0.71	0.75
Control Delay	24.5	11.5	29.0	9.6	10.2	17.8	0.7	38.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	11.5	29.0	9.6	10.2	17.8	0.7	38.5	17.1
Queue Length 50th (m)	7.3	2.7	22.4	1.0	1.5	27.2	0.0	12.5	73.4
Queue Length 95th (m)	16.9	12.0	41.5	9.4	m2.3	#169.1	m0.4	#42.8	95.5
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	360	536	379	471	137	939	929	185	1907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.13	0.44	0.12	0.30	0.82	0.19	0.66	0.70

Intersection Summary

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

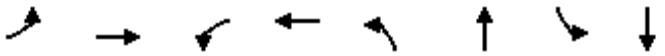
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	22	45	159	9	46	39	734	165	117	1180	90
Future Volume (vph)	57	22	45	159	9	46	39	734	165	117	1180	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1487	1579		1587	1373		1826	1597	1458	1615	3232	
Flt Permitted	0.72	1.00		0.71	1.00		0.12	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	1127	1579		1188	1373		232	1597	1458	316	3232	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	23	47	167	9	48	41	773	174	123	1242	95
RTOR Reduction (vph)	0	32	0	0	33	0	0	0	78	0	7	0
Lane Group Flow (vph)	60	38	0	167	24	0	41	773	96	123	1330	0
Heavy Vehicles (%)	20%	7%	7%	15%	16%	17%	12%	15%	12%	13%	12%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.2	27.2		27.2	27.2		46.8	46.8	46.8	46.8	46.8	
Effective Green, g (s)	27.2	27.2		27.2	27.2		46.8	46.8	46.8	46.8	46.8	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	360	505		380	439		127	879	802	173	1779	
v/s Ratio Prot		0.02			0.02			c0.48			0.41	
v/s Ratio Perm	0.05			c0.14			0.18		0.07	0.39		
v/c Ratio	0.17	0.08		0.44	0.06		0.32	0.88	0.12	0.71	0.75	
Uniform Delay, d1	20.8	20.1		22.9	20.0		10.4	16.6	9.2	14.1	14.6	
Progression Factor	1.00	1.00		1.00	1.00		0.49	0.44	0.23	1.00	1.00	
Incremental Delay, d2	1.0	0.3		3.7	0.2		5.1	9.7	0.2	21.9	2.9	
Delay (s)	21.8	20.4		26.5	20.2		10.2	17.0	2.3	36.0	17.5	
Level of Service	C	C		C	C		B	B	A	D	B	
Approach Delay (s)		21.0			24.9			14.2			19.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



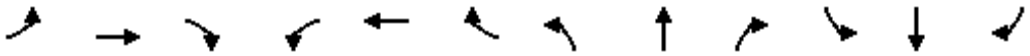
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	208	286	150	134	1083	200	1266
v/c Ratio	0.20	0.47	1.31	0.34	0.70	0.74	0.71	0.85
Control Delay	29.8	15.4	198.4	17.5	33.8	17.1	25.8	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	29.8	15.4	198.4	17.5	33.8	17.1	25.8	15.5
Queue Length 50th (m)	6.9	10.0	~63.2	10.1	8.3	82.8	12.5	39.3
Queue Length 95th (m)	16.8	30.2	#111.3	26.4	m15.4	m71.1	m27.0	50.8
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	261	445	219	441	192	1564	282	1590
Starvation Cap Reductn	0	0	0	0	0	0	0	17
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.47	1.31	0.34	0.70	0.69	0.71	0.80

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	57	141	272	60	83	127	830	199	190	1124	79
Future Volume (vph)	49	57	141	272	60	83	127	830	199	190	1124	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.91		1.00	0.97		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)	1534	1408		1544	1570		1337	2982		1616	3068	
Flt Permitted	0.66	1.00		0.55	1.00		0.11	1.00		0.17	1.00	
Satd. Flow (perm)	1067	1408		894	1570		162	2982		295	3068	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	60	148	286	63	87	134	874	209	200	1183	83
RTOR Reduction (vph)	0	100	0	0	56	0	0	26	0	0	6	0
Lane Group Flow (vph)	52	108	0	286	94	0	134	1057	0	200	1260	0
Heavy Vehicles (%)	19%	8%	20%	13%	10%	13%	26%	15%	8%	8%	15%	18%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.9	20.9		20.9	20.9		48.0	41.0		48.0	41.0	
Effective Green, g (s)	20.9	20.9		20.9	20.9		48.0	41.0		48.0	41.0	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.56	0.48		0.56	0.48	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	262	346		219	386		188	1438		275	1479	
v/s Ratio Prot		0.08			0.06		0.06	0.35		c0.06	c0.41	
v/s Ratio Perm	0.05			c0.32			0.34			0.35		
v/c Ratio	0.20	0.31		1.31	0.24		0.71	0.73		0.73	0.85	
Uniform Delay, d1	25.4	26.2		32.0	25.7		12.9	17.6		11.3	19.3	
Progression Factor	1.00	1.00		1.00	1.00		1.78	0.89		1.90	0.55	
Incremental Delay, d2	1.7	2.3		166.7	1.5		14.4	2.3		12.0	4.9	
Delay (s)	27.1	28.5		198.7	27.2		37.4	18.0		33.5	15.6	
Level of Service	C	C		F	C		D	B		C	B	
Approach Delay (s)		28.2			139.7			20.1			18.0	
Approach LOS		C			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



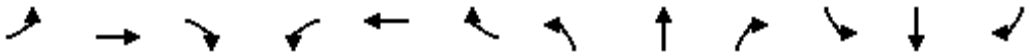
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	395	368	297	172	51	193	822	53	1535
v/c Ratio	1.03	0.87	1.32	0.41	0.11	0.97	0.70	0.18	1.37
Control Delay	82.6	45.2	196.2	31.2	0.5	74.9	35.5	16.9	201.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.6	45.2	196.2	31.2	0.5	74.9	35.5	16.9	201.1
Queue Length 50th (m)	~54.4	42.8	~45.2	23.8	0.0	29.5	71.7	6.3	~175.8
Queue Length 95th (m)	#121.7	#91.0	#93.6	41.7	0.0	m#40.6	m89.8	m7.5	m#200.2
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	383	424	225	416	462	198	1166	296	1121
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.87	1.32	0.41	0.11	0.97	0.70	0.18	1.37

Intersection Summary

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

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

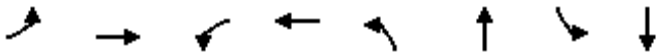
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	127	230	288	167	49	187	642	155	51	1042	447
Future Volume (vph)	383	127	230	288	167	49	187	642	155	51	1042	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1560	1487		1531	1779	1498	1465	3130		1694	2921	
Flt Permitted	0.61	1.00		0.24	1.00	1.00	0.13	1.00		0.22	1.00	
Satd. Flow (perm)	1002	1487		389	1779	1498	199	3130		399	2921	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	395	131	237	297	172	51	193	662	160	53	1074	461
RTOR Reduction (vph)	0	77	0	0	0	39	0	25	0	0	57	0
Lane Group Flow (vph)	395	291	0	297	172	12	193	797	0	53	1478	0
Heavy Vehicles (%)	17%	18%	16%	14%	8%	9%	15%	13%	14%	3%	15%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Actuated g/C Ratio	0.32	0.23		0.32	0.23	0.23	0.45	0.36		0.45	0.36	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	363	348		217	416	350	193	1141		285	1065	
v/s Ratio Prot	0.09	0.20		c0.11	0.10		c0.08	0.25		0.02	c0.51	
v/s Ratio Perm	0.25			c0.32		0.01	0.36			0.07		
v/c Ratio	1.09	0.84		1.37	0.41	0.03	1.00	0.70		0.19	1.39	
Uniform Delay, d1	28.2	31.0		27.0	27.6	25.1	20.2	23.0		14.1	27.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.62	1.48		1.57	1.53	
Incremental Delay, d2	73.0	20.8		192.4	3.0	0.2	53.5	2.5		0.7	177.6	
Delay (s)	101.1	51.8		219.5	30.6	25.3	86.1	36.5		23.0	218.9	
Level of Service	F	D		F	C	C	F	D		C	F	
Approach Delay (s)		77.3			138.0			45.9			212.4	
Approach LOS		E			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	132.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



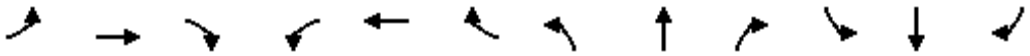
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	73	310	244	32	954	237	1417
v/c Ratio	0.08	0.12	0.80	0.40	0.16	0.82	1.03	1.23
Control Delay	16.9	12.5	47.7	7.9	12.1	31.1	50.1	127.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	12.5	47.7	7.9	12.1	31.1	50.1	127.9
Queue Length 50th (m)	3.0	4.5	41.9	3.0	2.4	70.8	~21.2	~156.3
Queue Length 95th (m)	8.2	13.0	#103.5	22.2	6.6	95.2	m10.8	m97.2
Internal Link Dist (m)		260.4		114.4		57.6		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	365	586	387	608	201	1159	229	1153
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.12	0.80	0.40	0.16	0.82	1.03	1.23

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	42	29	301	28	209	31	785	141	230	1336	39
Future Volume (vph)	29	42	29	301	28	209	31	785	141	230	1336	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.98		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)	1573	1558		1659	1473		1448	3133		1644	3157	
Flt Permitted	0.47	1.00		0.71	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	771	1558		1239	1473		213	3133		242	3157	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	43	30	310	29	215	32	809	145	237	1377	40
RTOR Reduction (vph)	0	18	0	0	148	0	0	18	0	0	3	0
Lane Group Flow (vph)	30	55	0	310	96	0	32	936	0	237	1414	0
Heavy Vehicles (%)	16%	19%	11%	10%	0%	15%	26%	14%	13%	11%	15%	20%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.4	33.4		26.6	26.6		35.6	28.6		35.6	28.6	
Effective Green, g (s)	33.4	33.4		26.6	26.6		35.6	28.6		35.6	28.6	
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.42	0.34		0.42	0.34	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	329	612		387	460		190	1054		216	1062	
v/s Ratio Prot	0.00	c0.04			0.07		0.01	0.30		c0.09	c0.45	
v/s Ratio Perm	0.03			c0.25			0.06			0.37		
v/c Ratio	0.09	0.09		0.80	0.21		0.17	0.89		1.10	1.33	
Uniform Delay, d1	16.3	16.2		26.8	21.5		18.3	26.7		20.0	28.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.18	0.84	
Incremental Delay, d2	0.0	0.3		15.9	1.0		1.9	11.1		51.0	149.9	
Delay (s)	16.3	16.5		42.7	22.5		20.2	37.8		74.6	173.5	
Level of Service	B	B		D	C		C	D		E	F	
Approach Delay (s)		16.5			33.8			37.2			159.3	
Approach LOS		B			C			D			F	

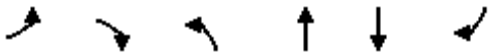
Intersection Summary			
HCM 2000 Control Delay	97.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	26	914	15	36	1473
Future Volume (Veh/h)	12	26	914	15	36	1473
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	13	27	952	16	38	1534
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2570	960			968	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2570	960			968	
tC, single (s)	6.5	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	48	91			95	
cM capacity (veh/h)	25	306			704	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	40	968	38	1534
Volume Left	13	0	38	0
Volume Right	27	16	0	0
cSH	66	1700	704	1700
Volume to Capacity	0.61	0.57	0.05	0.90
Queue Length 95th (m)	19.6	0.0	1.3	0.0
Control Delay (s)	122.1	0.0	10.4	0.0
Lane LOS	F		B	
Approach Delay (s)	122.1	0.0	0.3	
Approach LOS	F			

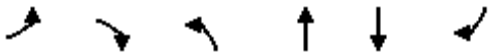
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	60	40	883	1402	76
Future Volume (Veh/h)	34	60	40	883	1402	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	36	63	42	929	1476	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2489	1476	1556			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2489	1476	1556			
tC, single (s)	6.6	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.7	3.4	2.5			
p0 queue free %	0	56	88			
cM capacity (veh/h)	25	144	359			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	99	971	1476	80
Volume Left	36	42	0	0
Volume Right	63	0	0	80
cSH	53	359	1700	1700
Volume to Capacity	1.87	0.12	0.87	0.05
Queue Length 95th (m)	73.2	3.0	0.0	0.0
Control Delay (s)	580.2	4.8	0.0	0.0
Lane LOS	F	A		
Approach Delay (s)	580.2	4.8	0.0	
Approach LOS	F			

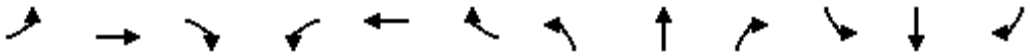
Intersection Summary			
Average Delay	23.6		
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	17	23	886	1393	53
Future Volume (Veh/h)	40	17	23	886	1393	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	18	25	953	1498	57
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2530	1526	1555			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2530	1526	1555			
tC, single (s)	6.5	6.2	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.5			
p0 queue free %	0	88	93			
cM capacity (veh/h)	27	146	359			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	61	978	1555
Volume Left	43	25	0
Volume Right	18	0	57
cSH	36	359	1700
Volume to Capacity	1.72	0.07	0.91
Queue Length 95th (m)	50.4	1.7	0.0
Control Delay (s)	590.4	2.8	0.0
Lane LOS	F	A	
Approach Delay (s)	590.4	2.8	0.0
Approach LOS	F		

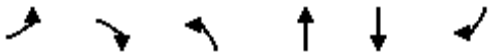
Intersection Summary			
Average Delay	15.0		
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	0	91	0	0	0	79	816	0	0	1193	195
Future Volume (Veh/h)	97	0	91	0	0	0	79	816	0	0	1193	195
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Hourly flow rate (vph)	101	0	95	0	0	0	82	850	0	0	1243	203
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	2358	2358	1344	2454	2460	850	1446			850		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2358	2358	1344	2454	2460	850	1446			850		
tC, single (s)	7.2	6.5	6.4	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	0	100	44	100	100	100	82			100		
cM capacity (veh/h)	19	29	170	8	25	360	445			788		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	196	0	932	1446
Volume Left	101	0	82	0
Volume Right	95	0	0	203
cSH	34	1700	445	788
Volume to Capacity	5.79	0.00	0.18	0.00
Queue Length 95th (m)	Err	0.0	5.1	0.0
Control Delay (s)	Err	0.0	6.3	0.0
Lane LOS	F	A	A	
Approach Delay (s)	Err	0.0	6.3	0.0
Approach LOS	F	A		

Intersection Summary				
Average Delay	763.7			
Intersection Capacity Utilization	126.2%	ICU Level of Service	H	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	42	82	60	818	1224	59
Future Volume (Veh/h)	42	82	60	818	1224	59
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	43	84	61	835	1249	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				378		
pX, platoon unblocked	0.71					
vC, conflicting volume	2236	1279	1309			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2532	1279	1309			
tC, single (s)	6.4	6.3	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	0	57	87			
cM capacity (veh/h)	19	196	485			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	127	896	1309
Volume Left	43	61	0
Volume Right	84	0	60
cSH	47	485	1700
Volume to Capacity	2.73	0.13	0.77
Queue Length 95th (m)	103.1	3.3	0.0
Control Delay (s)	967.4	4.0	0.0
Lane LOS	F	A	
Approach Delay (s)	967.4	4.0	0.0
Approach LOS	F		

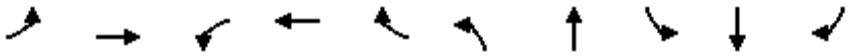
Intersection Summary			
Average Delay	54.2		
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	128	748	14	125	1175
Future Volume (Veh/h)	8	128	748	14	125	1175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	8	131	763	14	128	1199
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			254			
pX, platoon unblocked	0.65	0.65			0.65	
vC, conflicting volume	2225	770			777	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2612	380			391	
tC, single (s)	6.6	6.3			4.3	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.4	
p0 queue free %	36	69			82	
cM capacity (veh/h)	12	422			702	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	139	777	1327
Volume Left	8	0	128
Volume Right	131	14	0
cSH	146	1700	702
Volume to Capacity	0.95	0.46	0.18
Queue Length 95th (m)	51.7	0.0	5.0
Control Delay (s)	122.5	0.0	7.4
Lane LOS	F		A
Approach Delay (s)	122.5	0.0	7.4
Approach LOS	F		

Intersection Summary			
Average Delay	12.0		
Intersection Capacity Utilization	127.3%	ICU Level of Service	H
Analysis Period (min)	15		

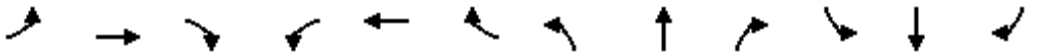


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	223	347	70	204	91	46	510	153	776	287
v/c Ratio	0.53	0.79	0.21	0.52	0.22	0.25	0.91	0.56	1.15	0.43
Control Delay	23.8	42.0	17.6	35.3	3.6	18.0	53.4	24.3	114.7	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	42.0	17.6	35.3	3.6	18.0	53.4	24.3	114.7	13.5
Queue Length 50th (m)	26.7	53.7	7.6	32.2	0.0	4.4	91.5	15.8	~193.2	17.3
Queue Length 95th (m)	42.9	#89.7	15.5	52.9	6.3	11.1	#164.9	30.0	#277.2	43.2
Internal Link Dist (m)		208.9		217.2			306.0		230.2	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	417	502	413	604	581	187	561	275	674	674
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.69	0.17	0.34	0.16	0.25	0.91	0.56	1.15	0.43

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	173	164	68	198	88	45	458	37	148	753	278
Future Volume (vph)	216	173	164	68	198	88	45	458	37	148	753	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1483		1601	1628	1361	1560	1598		1674	1685	1445
Flt Permitted	0.51	1.00		0.36	1.00	1.00	0.11	1.00		0.22	1.00	1.00
Satd. Flow (perm)	875	1483		613	1628	1361	188	1598		379	1685	1445
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	223	178	169	70	204	91	46	472	38	153	776	287
RTOR Reduction (vph)	0	33	0	0	0	69	0	3	0	0	0	97
Lane Group Flow (vph)	223	314	0	70	204	22	46	507	0	153	776	190
Heavy Vehicles (%)	11%	22%	18%	14%	18%	20%	17%	18%	30%	9%	14%	13%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	36.4	26.3		31.8	24.0	24.0	39.0	35.0		45.0	38.0	38.0
Effective Green, g (s)	36.4	26.3		31.8	24.0	24.0	39.0	35.0		45.0	38.0	38.0
Actuated g/C Ratio	0.37	0.27		0.33	0.25	0.25	0.40	0.36		0.46	0.39	0.39
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	406	400		278	400	335	131	573		267	656	563
v/s Ratio Prot	c0.06	c0.21		0.02	0.13		0.01	0.32		c0.04	c0.46	
v/s Ratio Perm	0.15			0.06		0.02	0.13			0.22		0.13
v/c Ratio	0.55	0.79		0.25	0.51	0.07	0.35	0.89		0.57	1.18	0.34
Uniform Delay, d1	22.3	33.0		23.5	31.7	28.2	23.2	29.4		18.3	29.8	20.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	9.8		0.5	1.1	0.1	1.6	18.0		3.0	97.3	1.6
Delay (s)	23.8	42.7		24.0	32.8	28.3	24.8	47.4		21.2	127.1	22.5
Level of Service	C	D		C	C	C	C	D		C	F	C
Approach Delay (s)		35.3			30.0			45.5			89.1	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	60.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	97.5	Sum of lost time (s)	21.4
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



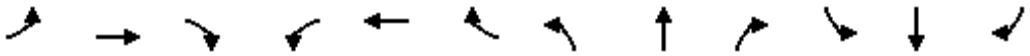
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	91	447	76	357	621
Future Volume (Veh/h)	22	91	447	76	357	621
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	24	98	481	82	384	668
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (m)						330
pX, platoon unblocked	0.71					
vC, conflicting volume	1958	522			563	
vC1, stage 1 conf vol	522					
vC2, stage 2 conf vol	1436					
vCu, unblocked vol	2141	522			563	
tC, single (s)	6.5	6.4			4.2	
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4			2.3	
p0 queue free %	74	82			60	
cM capacity (veh/h)	91	530			965	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	24	98	563	384	668
Volume Left	24	0	0	384	0
Volume Right	0	98	82	0	0
cSH	91	530	1700	965	1700
Volume to Capacity	0.26	0.18	0.33	0.40	0.39
Queue Length 95th (m)	7.3	5.1	0.0	14.7	0.0
Control Delay (s)	57.9	13.3	0.0	11.2	0.0
Lane LOS	F	B		B	
Approach Delay (s)	22.1		0.0	4.1	
Approach LOS	C				

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
101: Malden Road & Todd Lane

07/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	2	3	6	357	2	40	6	234	337	25	229	2
Future Volume (veh/h)	2	3	6	357	2	40	6	234	337	25	229	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	3	6	376	2	42	6	246	355	26	241	2
Approach Volume (veh/h)		11			420			607			269	
Crossing Volume (veh/h)		643			254			31			384	
High Capacity (veh/h)		832			1135			1352			1024	
High v/c (veh/h)		0.01			0.37			0.45			0.26	
Low Capacity (veh/h)		665			935			1131			835	
Low v/c (veh/h)		0.02			0.45			0.54			0.32	

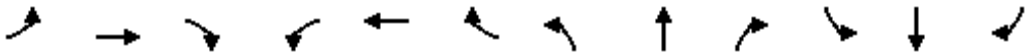
Intersection Summary					
Maximum v/c High	0.45				
Maximum v/c Low	0.54				
Intersection Capacity Utilization	69.9%	ICU Level of Service		C	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	27	51	72	21	587	82	49	618
v/c Ratio	0.09	0.04	0.10	0.12	0.06	0.82	0.12	0.28	0.45
Control Delay	19.1	9.2	18.8	6.6	2.9	16.4	0.4	15.8	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	19.1	9.2	18.8	6.6	2.9	16.6	0.4	15.8	15.1
Queue Length 50th (m)	3.7	0.3	4.8	0.3	0.0	17.7	0.0	4.3	30.6
Queue Length 95th (m)	11.3	5.7	13.6	9.0	m0.7	28.8	0.0	9.8	34.6
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	437	686	533	576	423	898	807	216	1711
Starvation Cap Reductn	0	0	0	0	0	42	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.04	0.10	0.13	0.05	0.69	0.10	0.23	0.36

Intersection Summary

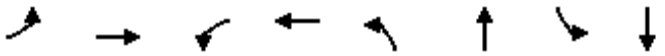
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	3	23	48	3	65	20	552	77	46	547	34
Future Volume (vph)	37	3	23	48	3	65	20	552	77	46	547	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1628		1659	1299		1948	1597	1372	1484	3033	
Flt Permitted	0.71	1.00		0.74	1.00		0.37	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	1059	1628		1292	1299		752	1597	1372	385	3033	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	39	3	24	51	3	69	21	587	82	49	582	36
RTOR Reduction (vph)	0	14	0	0	41	0	0	0	45	0	7	0
Lane Group Flow (vph)	39	13	0	51	31	0	21	587	37	49	611	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	33.0	33.0		33.0	33.0		36.0	36.0	36.0	36.0	36.0	
Effective Green, g (s)	33.0	33.0		33.0	33.0		36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.45	0.45	0.45	0.45	0.45	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	436	671		532	535		338	718	617	173	1364	
v/s Ratio Prot		0.01			0.02			c0.37			0.20	
v/s Ratio Perm	0.04			c0.04			0.03		0.03	0.13		
v/c Ratio	0.09	0.02		0.10	0.06		0.06	0.82	0.06	0.28	0.45	
Uniform Delay, d1	14.3	13.9		14.4	14.1		12.4	19.1	12.4	13.9	15.2	
Progression Factor	1.00	1.00		1.00	1.00		0.26	0.39	0.04	1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.4	0.2		0.3	9.2	0.2	4.1	1.1	
Delay (s)	14.7	14.0		14.7	14.4		3.6	16.7	0.7	17.9	16.2	
Level of Service	B	B		B	B		A	B	A	B	B	
Approach Delay (s)		14.4			14.5			14.4			16.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

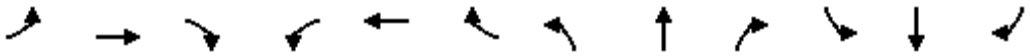
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	49	87	80	78	714	98	535
v/c Ratio	0.07	0.08	0.21	0.13	0.21	0.69	0.33	0.53
Control Delay	18.2	9.1	20.1	8.6	9.2	20.8	13.5	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	9.1	20.1	8.6	9.2	20.8	13.5	19.6
Queue Length 50th (m)	3.2	1.2	8.6	2.1	3.6	47.0	6.4	24.8
Queue Length 95th (m)	9.8	8.4	21.0	11.6	m4.7	65.0	12.5	27.3
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	475	590	405	600	380	1451	301	1437
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.21	0.13	0.21	0.49	0.33	0.37

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	12	34	82	22	54	73	584	87	92	467	36
Future Volume (vph)	32	12	34	82	22	54	73	584	87	92	467	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.89		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)	1738	1540		1442	1532		1574	2956		1544	2943	
Flt Permitted	0.70	1.00		0.73	1.00		0.40	1.00		0.28	1.00	
Satd. Flow (perm)	1290	1540		1101	1532		656	2956		447	2943	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	13	36	87	23	57	78	621	93	98	497	38
RTOR Reduction (vph)	0	23	0	0	36	0	0	19	0	0	9	0
Lane Group Flow (vph)	34	26	0	87	44	0	78	695	0	98	526	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	29.5	29.5		29.5	29.5		34.4	27.4		34.4	27.4	
Effective Green, g (s)	29.5	29.5		29.5	29.5		34.4	27.4		34.4	27.4	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.43	0.34		0.43	0.34	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	475	567		405	564		362	1012		288	1007	
v/s Ratio Prot		0.02			0.03		0.02	c0.24		c0.03	0.18	
v/s Ratio Perm	0.03			c0.08			0.07			0.12		
v/c Ratio	0.07	0.05		0.21	0.08		0.22	0.69		0.34	0.52	
Uniform Delay, d1	16.4	16.2		17.3	16.4		13.8	22.6		14.3	21.1	
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.82		1.06	0.87	
Incremental Delay, d2	0.3	0.2		1.2	0.3		1.0	2.9		3.1	1.9	
Delay (s)	16.7	16.4		18.5	16.7		12.6	21.5		18.2	20.2	
Level of Service	B	B		B	B		B	C		B	C	
Approach Delay (s)		16.5			17.6			20.6			19.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

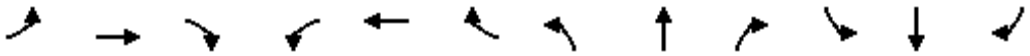
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	351	218	112	43	34	119	612	29	592
v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.38	0.59	0.09	0.61
Control Delay	34.2	15.0	18.0	23.9	0.3	15.9	23.8	11.6	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	15.0	18.0	23.9	0.3	15.9	23.8	11.6	26.7
Queue Length 50th (m)	39.8	11.1	10.6	5.0	0.0	7.4	26.5	2.8	41.7
Queue Length 95th (m)	#75.1	30.1	20.9	12.6	0.0	m15.9	44.5	m6.6	59.7
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	455	463	359	442	485	315	1036	336	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.38	0.59	0.09	0.61

Intersection Summary

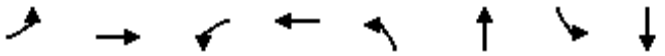
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	326	65	138	104	40	32	111	468	101	27	382	168
Future Volume (vph)	326	65	138	104	40	32	111	468	101	27	382	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1481		1491	1779	1484	1452	3121		1586	2800	
Flt Permitted	0.73	1.00		0.54	1.00	1.00	0.35	1.00		0.33	1.00	
Satd. Flow (perm)	1187	1481		850	1779	1484	531	3121		557	2800	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	351	70	148	112	43	34	119	503	109	29	411	181
RTOR Reduction (vph)	0	95	0	0	0	26	0	23	0	0	62	0
Lane Group Flow (vph)	351	123	0	112	43	8	119	589	0	29	530	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Actuated g/C Ratio	0.34	0.25		0.34	0.25	0.25	0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	368		341	442	369	299	1014		319	910	
v/s Ratio Prot	c0.07	0.08		0.03	0.02		c0.03	0.19		0.01	c0.19	
v/s Ratio Perm	c0.20			0.08		0.01	0.13			0.03		
v/c Ratio	0.82	0.33		0.33	0.10	0.02	0.40	0.58		0.09	0.58	
Uniform Delay, d1	23.5	24.6		19.1	23.1	22.7	15.2	22.5		14.3	22.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.13	1.01		1.03	1.24	
Incremental Delay, d2	15.6	2.4		2.6	0.4	0.1	3.1	1.9		0.5	2.6	
Delay (s)	39.1	27.0		21.7	23.6	22.8	20.3	24.7		15.2	30.6	
Level of Service	D	C		C	C	C	C	C		B	C	
Approach Delay (s)		34.5			22.3			23.9			29.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

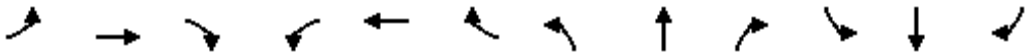
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	45	144	224	9	741	177	505
v/c Ratio	0.06	0.07	0.38	0.35	0.03	0.72	0.69	0.51
Control Delay	14.5	12.4	26.2	6.9	11.0	27.7	31.4	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	12.4	26.2	6.9	11.0	27.7	31.4	17.4
Queue Length 50th (m)	2.2	3.0	14.9	2.1	0.7	49.8	14.7	18.6
Queue Length 95th (m)	6.3	8.7	34.5	17.2	2.8	66.1	#38.3	33.9
Internal Link Dist (m)		260.4		114.4		529.3		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	444	670	384	637	338	1029	256	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.07	0.38	0.35	0.03	0.72	0.69	0.51

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	28	11	125	20	175	8	556	89	154	426	13
Future Volume (vph)	22	28	11	125	20	175	8	556	89	154	426	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.87		1.00	0.98		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)	1706	1708		1508	1514		1460	3119		1521	3043	
Flt Permitted	0.51	1.00		0.73	1.00		0.39	1.00		0.22	1.00	
Satd. Flow (perm)	908	1708		1155	1514		602	3119		352	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	25	32	13	144	23	201	9	639	102	177	490	15
RTOR Reduction (vph)	0	8	0	0	134	0	0	17	0	0	3	0
Lane Group Flow (vph)	25	37	0	144	90	0	9	724	0	177	502	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Effective Green, g (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Actuated g/C Ratio	0.42	0.42		0.33	0.33		0.38	0.30		0.38	0.30	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	407	713		384	503		305	920		236	897	
v/s Ratio Prot	0.00	c0.02			0.06		0.00	c0.23		c0.07	0.17	
v/s Ratio Perm	0.02			c0.12			0.01			0.22		
v/c Ratio	0.06	0.05		0.38	0.18		0.03	0.79		0.75	0.56	
Uniform Delay, d1	14.0	13.9		20.4	18.9		15.4	25.9		18.1	23.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.33	0.72	
Incremental Delay, d2	0.0	0.1		2.8	0.8		0.2	6.8		17.2	2.2	
Delay (s)	14.0	14.0		23.1	19.7		15.6	32.6		41.3	19.2	
Level of Service	B	B		C	B		B	C		D	B	
Approach Delay (s)		14.0			21.1			32.4			25.0	
Approach LOS		B			C			C			C	

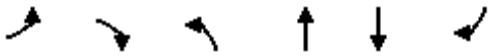
Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	25	675	4	12	433
Future Volume (Veh/h)	9	25	675	4	12	433
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	28	767	5	14	492
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1290	770			772	
vC1, stage 1 conf vol	770					
vC2, stage 2 conf vol	520					
vCu, unblocked vol	1290	770			772	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.2	
p0 queue free %	97	93			98	
cM capacity (veh/h)	367	394			852	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	38	772	14	492
Volume Left	10	0	14	0
Volume Right	28	5	0	0
cSH	387	1700	852	1700
Volume to Capacity	0.10	0.45	0.02	0.29
Queue Length 95th (m)	2.5	0.0	0.4	0.0
Control Delay (s)	15.3	0.0	9.3	0.0
Lane LOS	C		A	
Approach Delay (s)	15.3	0.0	0.3	
Approach LOS	C			

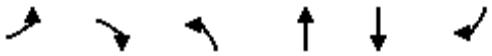
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	29	10	650	428	13
Future Volume (Veh/h)	34	29	10	650	428	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	39	33	11	739	486	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1247	486	501			
vC1, stage 1 conf vol	486					
vC2, stage 2 conf vol	761					
vCu, unblocked vol	1247	486	501			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4	2.4			
p0 queue free %	90	94	99			
cM capacity (veh/h)	385	554	968			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	72	11	739	486	15
Volume Left	39	11	0	0	0
Volume Right	33	0	0	0	15
cSH	447	968	1700	1700	1700
Volume to Capacity	0.16	0.01	0.43	0.29	0.01
Queue Length 95th (m)	4.3	0.3	0.0	0.0	0.0
Control Delay (s)	14.6	8.8	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	14.6	0.1		0.0	
Approach LOS	B				

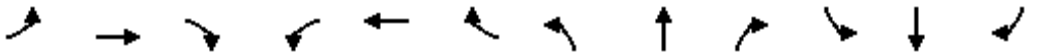
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	20	8	629	450	7
Future Volume (Veh/h)	29	20	8	629	450	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	32	22	9	691	495	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1208	499	503			
vC1, stage 1 conf vol	499					
vC2, stage 2 conf vol	709					
vCu, unblocked vol	1208	499	503			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4	2.2			
p0 queue free %	92	96	99			
cM capacity (veh/h)	390	560	1072			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	54	9	691	503
Volume Left	32	9	0	0
Volume Right	22	0	0	8
cSH	445	1072	1700	1700
Volume to Capacity	0.12	0.01	0.41	0.30
Queue Length 95th (m)	3.1	0.2	0.0	0.0
Control Delay (s)	14.2	8.4	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.2	0.1		0.0
Approach LOS	B			

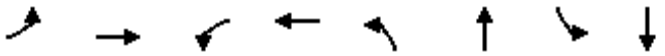
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	652	108	108	652	108	108	573	108	108	390	108
Future Volume (Veh/h)	108	652	108	108	652	108	108	573	108	108	390	108
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	117	709	117	117	709	117	117	623	117	117	424	117
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1986	1632	424	2045	1690	682	541			740		
vC1, stage 1 conf vol	658	658		916	916							
vC2, stage 2 conf vol	1328	974		1130	775							
vCu, unblocked vol	1986	1632	424	2045	1690	682	541			740		
tC, single (s)	7.2	6.5	6.4	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)	6.2	5.5		6.1	5.5							
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	0	0	80	0	0	74	88			86		
cM capacity (veh/h)	0	162	595	0	194	450	938			867		

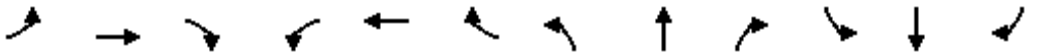
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	117	826	117	826	117	740	117	424	117
Volume Left	117	0	117	0	117	0	117	0	0
Volume Right	0	117	0	117	0	117	0	0	117
cSH	0	181	0	211	938	1700	867	1700	1700
Volume to Capacity	Err	4.57	Err	3.91	0.12	0.44	0.14	0.25	0.07
Queue Length 95th (m)	Err	Err	Err	Err	3.2	0.0	3.5	0.0	0.0
Control Delay (s)	Err	Err	Err	Err	9.4	0.0	9.8	0.0	0.0
Lane LOS	F	F	F	F	A		A		
Approach Delay (s)	Err		Err		1.3		1.7		
Approach LOS	F		F						

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	102.9%	ICU Level of Service	G	
Analysis Period (min)	15			



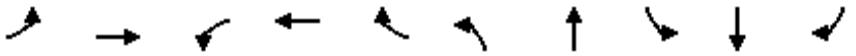
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	52	13	35	23	566	30	423
v/c Ratio	0.41	0.27	0.09	0.18	0.03	0.41	0.04	0.31
Control Delay	46.6	36.6	36.1	35.2	2.5	4.0	2.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	36.6	36.1	35.2	2.5	4.0	2.6	3.2
Queue Length 50th (m)	8.4	7.6	2.1	5.2	0.6	21.9	0.8	14.1
Queue Length 95th (m)	18.6	17.3	7.1	13.1	2.5	44.7	3.0	29.5
Internal Link Dist (m)		257.8		267.7		353.6		439.3
Turn Bay Length (m)	25.0		25.0		25.0		25.0	
Base Capacity (vph)	244	374	273	376	773	1385	673	1363
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.14	0.05	0.09	0.03	0.41	0.04	0.31

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	43	5	12	29	3	22	525	6	28	365	33
Future Volume (vph)	48	43	5	12	29	3	22	525	6	28	365	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		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)	1573	1842		1789	1859		1738	1670		1789	1640	
Flt Permitted	0.73	1.00		0.72	1.00		0.51	1.00		0.43	1.00	
Satd. Flow (perm)	1216	1842		1362	1859		933	1670		812	1640	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	51	47	5	13	32	3	23	559	7	30	388	35
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	0	0	2	0
Lane Group Flow (vph)	51	47	0	13	32	0	23	566	0	30	421	0
Heavy Vehicles (%)	16%	2%	10%	2%	2%	2%	5%	15%	2%	2%	16%	12%
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)	8.1	8.1		8.1	8.1		72.9	72.9		72.9	72.9	
Effective Green, g (s)	8.1	8.1		8.1	8.1		72.9	72.9		72.9	72.9	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.81	0.81		0.81	0.81	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	109	165		122	167		755	1352		657	1328	
v/s Ratio Prot		0.03			0.02			c0.34			0.26	
v/s Ratio Perm	c0.04			0.01			0.02			0.04		
v/c Ratio	0.47	0.29		0.11	0.19		0.03	0.42		0.05	0.32	
Uniform Delay, d1	38.9	38.3		37.6	37.9		1.7	2.5		1.7	2.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	1.0		0.4	0.6		0.1	1.0		0.1	0.6	
Delay (s)	42.1	39.2		38.0	38.5		1.7	3.4		1.8	2.8	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		40.6			38.4			3.3			2.7	
Approach LOS		D			D			A			A	

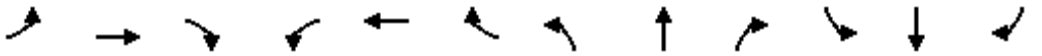
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	207	294	13	117	42	35	427	58	212	118
v/c Ratio	0.51	0.67	0.04	0.45	0.13	0.06	0.61	0.15	0.28	0.17
Control Delay	24.7	33.4	16.9	37.1	0.8	11.8	27.1	12.4	20.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	33.4	16.9	37.1	0.8	11.8	27.1	12.4	20.3	2.3
Queue Length 50th (m)	24.5	37.2	1.4	17.6	0.0	2.3	53.2	3.9	22.7	0.0
Queue Length 95th (m)	39.9	76.0	4.6	32.2	0.0	9.1	#120.2	13.4	52.1	5.9
Internal Link Dist (m)		208.9		217.2			306.0		353.6	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	406	585	418	645	612	547	703	389	749	694
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.50	0.03	0.18	0.07	0.06	0.61	0.15	0.28	0.17

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	201	70	12	108	39	32	369	24	53	195	109
Future Volume (vph)	190	201	70	12	108	39	32	369	24	53	195	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1514		1460	1455	1228	1472	1679		1508	1685	1361
Flt Permitted	0.53	1.00		0.58	1.00	1.00	0.63	1.00		0.37	1.00	1.00
Satd. Flow (perm)	910	1514		892	1455	1228	969	1679		581	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	218	76	13	117	42	35	401	26	58	212	118
RTOR Reduction (vph)	0	12	0	0	0	35	0	2	0	0	0	68
Lane Group Flow (vph)	207	282	0	13	117	7	35	425	0	58	212	50
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	28.8	23.2		15.1	13.5	13.5	38.8	35.0		41.6	36.4	36.4
Effective Green, g (s)	28.8	23.2		15.1	13.5	13.5	38.8	35.0		41.6	36.4	36.4
Actuated g/C Ratio	0.33	0.27		0.17	0.16	0.16	0.45	0.41		0.48	0.42	0.42
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	399	406		166	227	191	457	680		335	709	573
v/s Ratio Prot	c0.07	c0.19		0.00	0.08		0.00	c0.25		c0.01	0.13	
v/s Ratio Perm	0.10			0.01		0.01	0.03			0.07		0.04
v/c Ratio	0.52	0.70		0.08	0.52	0.03	0.08	0.63		0.17	0.30	0.09
Uniform Delay, d1	22.1	28.4		29.7	33.4	30.9	13.4	20.5		12.8	16.6	15.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	5.1		0.2	2.0	0.1	0.1	4.3		0.2	1.1	0.3
Delay (s)	23.2	33.5		29.9	35.4	31.0	13.5	24.8		13.0	17.6	15.3
Level of Service	C	C		C	D	C	B	C		B	B	B
Approach Delay (s)		29.3			33.9			23.9			16.2	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	21.4
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



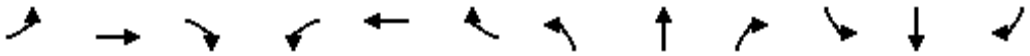
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	119	339	25	65	198
Future Volume (Veh/h)	9	119	339	25	65	198
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	127	361	27	69	211
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	724	374			388	
vC1, stage 1 conf vol	374					
vC2, stage 2 conf vol	349					
vCu, unblocked vol	724	374			388	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	98	80			94	
cM capacity (veh/h)	540	648			1149	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	10	127	388	69	211
Volume Left	10	0	0	69	0
Volume Right	0	127	27	0	0
cSH	540	648	1700	1149	1700
Volume to Capacity	0.02	0.20	0.23	0.06	0.12
Queue Length 95th (m)	0.4	5.5	0.0	1.5	0.0
Control Delay (s)	11.8	11.9	0.0	8.3	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.9		0.0	2.1	
Approach LOS	B				

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
101: Malden Road & Todd Lane

07/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	3	3	552	0	40	2	282	439	46	561	2
Future Volume (veh/h)	3	3	3	552	0	40	2	282	439	46	561	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	3	3	581	0	42	2	297	462	48	591	2
Approach Volume (veh/h)		9			623			761			641	
Crossing Volume (veh/h)		1220#			302			54			583	
High Capacity (veh/h)		519			1093			1328			873	
High v/c (veh/h)		0.02			0.57			0.57			0.73	
Low Capacity (veh/h)		395			897			1109			701	
Low v/c (veh/h)		0.02			0.69			0.69			0.91	

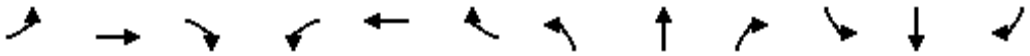
Intersection Summary				
Maximum v/c High	0.73			
Maximum v/c Low	0.91			
Intersection Capacity Utilization	111.3%	ICU Level of Service	H	
# Crossing flow exceeds 1200, method is not applicable				



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	71	169	59	35	664	149	87	946
v/c Ratio	0.15	0.11	0.37	0.11	0.15	0.83	0.20	0.49	0.62
Control Delay	23.1	10.8	25.5	9.4	5.6	15.4	0.8	22.6	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Total Delay	23.1	10.8	25.5	9.4	5.6	16.3	0.8	22.6	16.3
Queue Length 50th (m)	6.9	2.5	20.8	1.1	0.0	18.3	0.0	8.3	50.6
Queue Length 95th (m)	17.3	12.0	41.4	9.6	m1.7	23.8	m1.2	19.8	58.6
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	395	653	457	531	271	939	868	206	1788
Starvation Cap Reductn	0	0	0	0	0	94	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.11	0.37	0.11	0.13	0.79	0.17	0.42	0.53

Intersection Summary

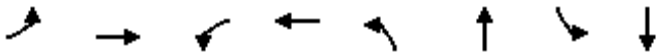
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	22	45	159	9	46	33	624	140	82	826	63
Future Volume (vph)	57	22	45	159	9	46	33	624	140	82	826	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.88		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1688		1659	1359		1948	1597	1372	1484	3031	
Flt Permitted	0.72	1.00		0.71	1.00		0.23	1.00	1.00	0.22	1.00	
Satd. Flow (perm)	1071	1688		1241	1359		462	1597	1372	351	3031	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	61	23	48	169	10	49	35	664	149	87	879	67
RTOR Reduction (vph)	0	30	0	0	31	0	0	0	74	0	8	0
Lane Group Flow (vph)	61	41	0	169	28	0	35	664	75	87	938	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.3	31.3		31.3	31.3		42.7	42.7	42.7	42.7	42.7	
Effective Green, g (s)	31.3	31.3		31.3	31.3		42.7	42.7	42.7	42.7	42.7	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	394	621		456	500		232	802	689	176	1522	
v/s Ratio Prot		0.02			0.02			c0.42			0.31	
v/s Ratio Perm	0.06			c0.14			0.08		0.05	0.25		
v/c Ratio	0.15	0.07		0.37	0.06		0.15	0.83	0.11	0.49	0.62	
Uniform Delay, d1	18.0	17.4		19.6	17.3		11.4	18.0	11.1	14.0	15.2	
Progression Factor	1.00	1.00		1.00	1.00		0.48	0.41	0.23	1.00	1.00	
Incremental Delay, d2	0.8	0.2		2.3	0.2		1.2	8.3	0.3	9.6	1.9	
Delay (s)	18.8	17.6		21.9	17.5		6.6	15.6	2.8	23.6	17.1	
Level of Service	B	B		C	B		A	B	A	C	B	
Approach Delay (s)		18.2			20.8			13.0			17.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

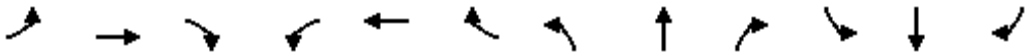


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	211	289	152	115	930	141	896
v/c Ratio	0.13	0.35	0.97	0.26	0.43	0.79	0.55	0.77
Control Delay	23.9	11.8	78.1	14.2	9.7	21.7	20.9	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	11.8	78.1	14.2	9.7	21.7	20.9	22.9
Queue Length 50th (m)	5.8	8.9	45.7	8.8	5.4	71.3	10.2	42.3
Queue Length 95th (m)	15.9	29.0	#108.3	25.7	m4.3	m67.6	18.6	44.5
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	404	604	299	577	270	1538	256	1526
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	36	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.35	0.97	0.26	0.43	0.62	0.55	0.59

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	57	141	272	60	83	108	705	169	133	787	55
Future Volume (vph)	49	57	141	272	60	83	108	705	169	133	787	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.91		1.00	0.97		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)	1738	1543		1442	1580		1574	2931		1544	2944	
Flt Permitted	0.66	1.00		0.59	1.00		0.20	1.00		0.19	1.00	
Satd. Flow (perm)	1208	1543		893	1580		337	2931		305	2944	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	52	61	150	289	64	88	115	750	180	141	837	59
RTOR Reduction (vph)	0	88	0	0	49	0	0	31	0	0	8	0
Lane Group Flow (vph)	52	123	0	289	103	0	115	899	0	141	888	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.5	28.5		28.5	28.5		40.4	33.4		40.4	33.4	
Effective Green, g (s)	28.5	28.5		28.5	28.5		40.4	33.4		40.4	33.4	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.48	0.39		0.48	0.39	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	405	517		299	529		262	1151		247	1156	
v/s Ratio Prot		0.08			0.07		0.04	c0.31		c0.05	0.30	
v/s Ratio Perm	0.04			c0.32			0.17			0.22		
v/c Ratio	0.13	0.24		0.97	0.19		0.44	0.78		0.57	0.77	
Uniform Delay, d1	19.6	20.4		27.8	20.1		13.7	22.6		14.3	22.4	
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89		1.54	0.86	
Incremental Delay, d2	0.7	1.1		44.2	0.8		3.1	3.2		8.3	4.4	
Delay (s)	20.3	21.5		72.0	20.9		14.3	23.3		30.2	23.7	
Level of Service	C	C		E	C		B	C		C	C	
Approach Delay (s)		21.3			54.4			22.4			24.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



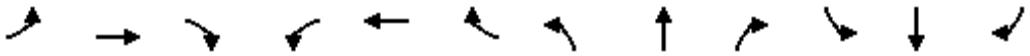
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	412	384	310	180	53	171	729	39	1121
v/c Ratio	1.10	0.90	1.50	0.43	0.12	0.87	0.63	0.13	1.04
Control Delay	105.5	49.7	270.7	31.6	0.5	60.8	21.0	11.0	64.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.5	49.7	270.7	31.6	0.5	60.8	21.0	11.0	64.5
Queue Length 50th (m)	~63.5	46.0	~54.9	25.0	0.0	21.0	29.7	3.7	~104.3
Queue Length 95th (m)	#129.9	#97.1	#104.6	43.6	0.0	m#34.6	49.4	m5.1	m#100.9
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	373	427	207	416	459	196	1160	310	1078
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.90	1.50	0.43	0.12	0.87	0.63	0.13	1.04

Intersection Summary

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

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

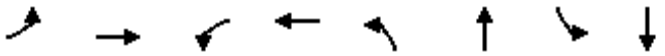
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	127	230	288	167	49	159	546	132	36	729	313
Future Volume (vph)	383	127	230	288	167	49	159	546	132	36	729	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1497		1491	1779	1484	1452	3114		1586	2803	
Flt Permitted	0.59	1.00		0.21	1.00	1.00	0.13	1.00		0.28	1.00	
Satd. Flow (perm)	967	1497		335	1779	1484	197	3114		459	2803	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	412	137	247	310	180	53	171	587	142	39	784	337
RTOR Reduction (vph)	0	77	0	0	0	41	0	25	0	0	57	0
Lane Group Flow (vph)	412	307	0	310	180	12	171	704	0	39	1064	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Actuated g/C Ratio	0.32	0.23		0.32	0.23	0.23	0.45	0.36		0.45	0.36	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	353	350		201	416	347	191	1135		298	1022	
v/s Ratio Prot	0.10	0.21		c0.13	0.10		c0.07	0.23		0.01	c0.38	
v/s Ratio Perm	0.27			c0.36		0.01	0.33			0.05		
v/c Ratio	1.17	0.88		1.54	0.43	0.04	0.90	0.62		0.13	1.04	
Uniform Delay, d1	28.2	31.4		26.7	27.7	25.1	18.1	22.2		13.7	27.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	2.06	0.90		1.01	1.16	
Incremental Delay, d2	101.6	25.4		267.3	3.3	0.2	33.7	1.8		0.7	36.1	
Delay (s)	129.7	56.8		293.9	31.0	25.3	71.0	21.8		14.6	67.4	
Level of Service	F	E		F	C	C	E	C		B	E	
Approach Delay (s)		94.5			180.6			31.1			65.6	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	81.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



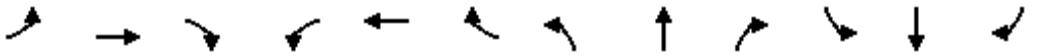
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	81	346	272	30	905	185	1106
v/c Ratio	0.09	0.13	1.08	0.45	0.15	0.78	0.81	0.99
Control Delay	16.9	12.4	107.3	8.3	12.0	29.1	23.2	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	12.4	107.3	8.3	12.0	29.1	23.2	34.4
Queue Length 50th (m)	3.3	5.0	~73.4	4.1	2.3	65.7	18.4	76.8
Queue Length 95th (m)	8.4	13.2	#117.2	21.4	6.0	84.1	m15.2	m64.3
Internal Link Dist (m)		260.4		114.4		529.3		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	365	626	321	606	201	1153	227	1112
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.13	1.08	0.45	0.15	0.78	0.81	0.99

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	42	29	301	28	209	26	667	120	161	935	27
Future Volume (vph)	29	42	29	301	28	209	26	667	120	161	935	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.98		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)	1706	1660		1508	1519		1460	3116		1521	3043	
Flt Permitted	0.41	1.00		0.70	1.00		0.14	1.00		0.16	1.00	
Satd. Flow (perm)	734	1660		1118	1519		209	3116		264	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	33	48	33	346	32	240	30	767	138	185	1075	31
RTOR Reduction (vph)	0	20	0	0	171	0	0	18	0	0	3	0
Lane Group Flow (vph)	33	61	0	346	101	0	30	887	0	185	1103	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	32.6	32.6		24.4	24.4		36.4	29.4		36.4	29.4	
Effective Green, g (s)	32.6	32.6		24.4	24.4		36.4	29.4		36.4	29.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29		0.43	0.35		0.43	0.35	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	329	636		320	436		192	1077		216	1052	
v/s Ratio Prot	0.00	c0.04			0.07		0.01	0.28		c0.07	c0.36	
v/s Ratio Perm	0.03			c0.31			0.05			0.30		
v/c Ratio	0.10	0.10		1.08	0.23		0.16	0.82		0.86	1.05	
Uniform Delay, d1	16.9	16.8		30.3	23.1		16.8	25.4		17.6	27.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.39	0.96	
Incremental Delay, d2	0.0	0.3		73.7	1.2		1.7	7.2		4.2	24.9	
Delay (s)	17.0	17.1		104.0	24.4		18.5	32.6		28.7	51.6	
Level of Service	B	B		F	C		B	C		C	D	
Approach Delay (s)		17.0			69.0			32.2			48.4	
Approach LOS		B			E			C			D	

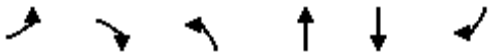
Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	26	777	13	25	1031
Future Volume (Veh/h)	12	26	777	13	25	1031
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	14	30	883	15	28	1172
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2118	890			898	
vC1, stage 1 conf vol	890					
vC2, stage 2 conf vol	1228					
vCu, unblocked vol	2118	890			898	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.2	
p0 queue free %	93	91			96	
cM capacity (veh/h)	207	336			765	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	44	898	28	1172
Volume Left	14	0	28	0
Volume Right	30	15	0	0
cSH	280	1700	765	1700
Volume to Capacity	0.16	0.53	0.04	0.69
Queue Length 95th (m)	4.2	0.0	0.9	0.0
Control Delay (s)	20.2	0.0	9.9	0.0
Lane LOS	C		A	
Approach Delay (s)	20.2	0.0	0.2	
Approach LOS	C			

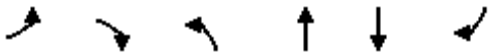
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	60	34	751	981	53
Future Volume (Veh/h)	34	60	34	751	981	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	39	68	39	853	1115	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2046	1115	1175			
vC1, stage 1 conf vol	1115					
vC2, stage 2 conf vol	931					
vCu, unblocked vol	2046	1115	1175			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4	2.4			
p0 queue free %	83	71	93			
cM capacity (veh/h)	228	237	528			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	107	39	853	1115	60
Volume Left	39	39	0	0	0
Volume Right	68	0	0	0	60
cSH	234	528	1700	1700	1700
Volume to Capacity	0.46	0.07	0.50	0.66	0.04
Queue Length 95th (m)	16.9	1.8	0.0	0.0	0.0
Control Delay (s)	32.8	12.4	0.0	0.0	0.0
Lane LOS	D	B			
Approach Delay (s)	32.8	0.5		0.0	
Approach LOS	D				

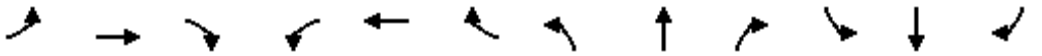
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	63.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	17	20	753	975	37
Future Volume (Veh/h)	40	17	20	753	975	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	19	22	827	1071	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1962	1092	1112			
vC1, stage 1 conf vol	1092					
vC2, stage 2 conf vol	871					
vCu, unblocked vol	1962	1092	1112			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4	2.2			
p0 queue free %	81	93	97			
cM capacity (veh/h)	236	254	635			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	63	22	827	1112
Volume Left	44	22	0	0
Volume Right	19	0	0	41
cSH	241	635	1700	1700
Volume to Capacity	0.26	0.03	0.49	0.65
Queue Length 95th (m)	7.7	0.8	0.0	0.0
Control Delay (s)	25.1	10.9	0.0	0.0
Lane LOS	D	B		
Approach Delay (s)	25.1	0.3		0.0
Approach LOS	D			

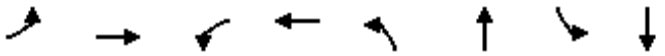
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1023	170	170	1023	170	170	694	170	170	835	170
Future Volume (Veh/h)	170	1023	170	170	1023	170	170	694	170	170	835	170
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	185	1112	185	185	1112	185	185	754	185	185	908	185
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	3143	2587	908	3236	2680	846	1093			939		
vC1, stage 1 conf vol	1278	1278		1216	1216							
vC2, stage 2 conf vol	1865	1309		2019	1463							
vCu, unblocked vol	3143	2587	908	3236	2680	846	1093			939		
tC, single (s)	7.2	6.5	6.4	7.1	6.5	6.2	4.3			4.1		
tC, 2 stage (s)	6.2	5.5		6.1	5.5							
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	0	0	40	0	0	49	68			75		
cM capacity (veh/h)	0	13	311	0	11	362	573			730		

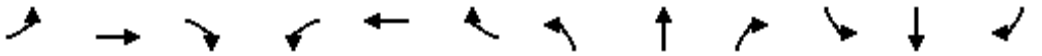
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	185	1297	185	1297	185	939	185	908	185
Volume Left	185	0	185	0	185	0	185	0	0
Volume Right	0	185	0	185	0	185	0	0	185
cSH	0	15	0	13	573	1700	730	1700	1700
Volume to Capacity	Err	87.63	Err	100.44	0.32	0.55	0.25	0.53	0.11
Queue Length 95th (m)	Err	Err	Err	Err	10.6	0.0	7.6	0.0	0.0
Control Delay (s)	Err	Err	Err	Err	14.3	0.0	11.6	0.0	0.0
Lane LOS	F	F	F	F	B		B		
Approach Delay (s)	Err		Err		2.3		1.7		
Approach LOS	F		F						

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	143.2%	ICU Level of Service	H	
Analysis Period (min)	15			



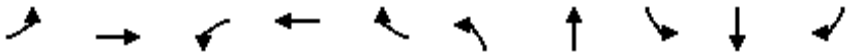
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	45	89	9	66	54	690	55	956
v/c Ratio	0.37	0.45	0.07	0.34	0.14	0.50	0.10	0.70
Control Delay	44.9	41.8	35.5	38.2	3.6	4.8	2.9	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	41.8	35.5	38.2	3.6	4.8	2.9	8.4
Queue Length 50th (m)	7.4	13.7	1.4	9.8	1.6	30.7	1.6	59.2
Queue Length 95th (m)	17.1	26.6	5.5	21.0	5.3	60.9	4.9	128.3
Internal Link Dist (m)		257.8		267.7		353.6		439.3
Turn Bay Length (m)	25.0		25.0		25.0		25.0	
Base Capacity (vph)	237	375	264	377	377	1383	574	1365
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.24	0.03	0.18	0.14	0.50	0.10	0.70

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	74	8	8	54	6	51	636	12	51	857	41
Future Volume (vph)	42	74	8	8	54	6	51	636	12	51	857	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	1.00		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)	1573	1840		1789	1853		1738	1669		1789	1647	
Flt Permitted	0.71	1.00		0.70	1.00		0.25	1.00		0.37	1.00	
Satd. Flow (perm)	1182	1840		1317	1853		456	1669		694	1647	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	45	80	9	9	59	7	54	677	13	55	912	44
RTOR Reduction (vph)	0	5	0	0	5	0	0	1	0	0	1	0
Lane Group Flow (vph)	45	84	0	9	61	0	54	689	0	55	955	0
Heavy Vehicles (%)	16%	2%	10%	2%	2%	2%	5%	15%	2%	2%	16%	12%
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)	8.2	8.2		8.2	8.2		72.8	72.8		72.8	72.8	
Effective Green, g (s)	8.2	8.2		8.2	8.2		72.8	72.8		72.8	72.8	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.81	0.81		0.81	0.81	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	107	167		119	168		368	1350		561	1332	
v/s Ratio Prot		c0.05			0.03			0.41			c0.58	
v/s Ratio Perm	0.04			0.01			0.12			0.08		
v/c Ratio	0.42	0.50		0.08	0.36		0.15	0.51		0.10	0.72	
Uniform Delay, d1	38.7	38.9		37.4	38.4		1.9	2.8		1.8	3.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	2.3		0.3	1.3		0.8	1.4		0.3	3.3	
Delay (s)	41.3	41.3		37.7	39.8		2.7	4.2		2.1	7.2	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		41.3			39.5			4.1			7.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

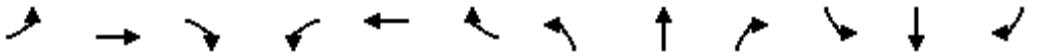


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	235	366	74	215	96	41	457	113	573	212
v/c Ratio	0.56	0.81	0.25	0.59	0.24	0.18	0.79	0.41	0.86	0.33
Control Delay	24.6	43.9	18.1	37.8	4.3	16.9	41.0	20.4	45.3	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	43.9	18.1	37.8	4.3	16.9	41.0	20.4	45.3	9.3
Queue Length 50th (m)	28.3	58.1	8.1	34.8	0.0	4.2	79.6	12.0	~118.5	7.1
Queue Length 95th (m)	45.3	#103.4	16.3	57.1	7.2	10.4	#136.6	23.5	#189.1	25.4
Internal Link Dist (m)		208.9		217.2			306.0		353.6	
Turn Bay Length (m)	50.0		46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	417	496	367	532	527	231	581	276	665	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.74	0.20	0.40	0.18	0.18	0.79	0.41	0.86	0.33

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	173	164	68	198	88	38	389	31	104	527	195
Future Volume (vph)	216	173	164	68	198	88	38	389	31	104	527	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1483		1460	1455	1228	1472	1675		1508	1685	1361
Flt Permitted	0.50	1.00		0.34	1.00	1.00	0.21	1.00		0.27	1.00	1.00
Satd. Flow (perm)	859	1483		516	1455	1228	329	1675		422	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	235	188	178	74	215	96	41	423	34	113	573	212
RTOR Reduction (vph)	0	33	0	0	0	71	0	3	0	0	0	98
Lane Group Flow (vph)	235	333	0	74	215	25	41	454	0	113	573	114
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	37.4	27.3		33.2	25.2	25.2	39.0	35.0		45.0	38.0	38.0
Effective Green, g (s)	37.4	27.3		33.2	25.2	25.2	39.0	35.0		45.0	38.0	38.0
Actuated g/C Ratio	0.38	0.28		0.34	0.26	0.26	0.40	0.35		0.46	0.39	0.39
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	405	410		250	371	313	176	593		269	648	523
v/s Ratio Prot	c0.06	c0.22		0.02	0.15		0.01	0.27		c0.03	c0.34	
v/s Ratio Perm	0.16			0.08		0.02	0.08			0.16		0.08
v/c Ratio	0.58	0.81		0.30	0.58	0.08	0.23	0.77		0.42	0.88	0.22
Uniform Delay, d1	22.5	33.3		23.4	32.1	27.9	20.4	28.2		17.7	28.3	20.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	11.7		0.7	2.2	0.1	0.7	9.2		1.1	16.2	1.0
Delay (s)	24.6	45.0		24.1	34.3	28.0	21.1	37.4		18.7	44.5	21.3
Level of Service	C	D		C	C	C	C	D		B	D	C
Approach Delay (s)		37.0			30.8			36.0			35.8	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	98.7	Sum of lost time (s)	21.4
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



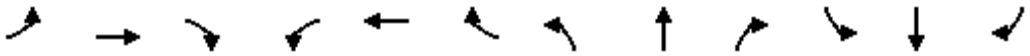
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	91	380	65	250	435
Future Volume (Veh/h)	22	91	380	65	250	435
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	97	404	69	266	463
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	1434	438			473	
vC1, stage 1 conf vol	438					
vC2, stage 2 conf vol	995					
vCu, unblocked vol	1434	438			473	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	90	84			75	
cM capacity (veh/h)	238	596			1068	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	97	473	266	463
Volume Left	23	0	0	266	0
Volume Right	0	97	69	0	0
cSH	238	596	1700	1068	1700
Volume to Capacity	0.10	0.16	0.28	0.25	0.27
Queue Length 95th (m)	2.4	4.4	0.0	7.5	0.0
Control Delay (s)	21.7	12.2	0.0	9.5	0.0
Lane LOS	C	B		A	
Approach Delay (s)	14.0		0.0	3.5	
Approach LOS	B				

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
101: Malden Road & Todd Lane

08/05/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	2	3	6	357	2	40	6	234	337	25	229	2
Future Volume (veh/h)	2	3	6	357	2	40	6	234	337	25	229	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	3	6	376	2	42	6	246	355	26	241	2
Approach Volume (veh/h)		11			420			607			269	
Crossing Volume (veh/h)		643			254			31			384	
High Capacity (veh/h)		832			1135			1352			1024	
High v/c (veh/h)		0.01			0.37			0.45			0.26	
Low Capacity (veh/h)		665			935			1131			835	
Low v/c (veh/h)		0.02			0.45			0.54			0.32	

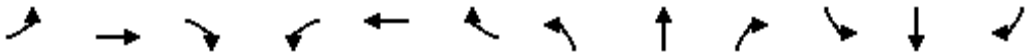
Intersection Summary					
Maximum v/c High	0.45				
Maximum v/c Low	0.54				
Intersection Capacity Utilization	69.9%	ICU Level of Service		C	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	27	51	72	21	587	82	49	618
v/c Ratio	0.09	0.04	0.10	0.12	0.06	0.82	0.12	0.28	0.45
Control Delay	19.1	9.2	18.8	6.6	2.9	16.4	0.4	15.8	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	19.1	9.2	18.8	6.6	2.9	16.6	0.4	15.8	15.1
Queue Length 50th (m)	3.7	0.3	4.8	0.3	0.0	17.7	0.0	4.3	30.6
Queue Length 95th (m)	11.3	5.7	13.6	9.0	m0.7	28.8	0.0	9.8	34.6
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	437	686	533	576	423	898	807	216	1711
Starvation Cap Reductn	0	0	0	0	0	42	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.04	0.10	0.13	0.05	0.69	0.10	0.23	0.36

Intersection Summary

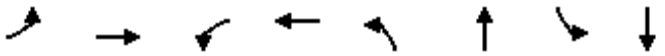
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	3	23	48	3	65	20	552	77	46	547	34
Future Volume (vph)	37	3	23	48	3	65	20	552	77	46	547	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1628		1659	1299		1948	1597	1372	1484	3033	
Flt Permitted	0.71	1.00		0.74	1.00		0.37	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	1059	1628		1292	1299		752	1597	1372	385	3033	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	39	3	24	51	3	69	21	587	82	49	582	36
RTOR Reduction (vph)	0	14	0	0	41	0	0	0	45	0	7	0
Lane Group Flow (vph)	39	13	0	51	31	0	21	587	37	49	611	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	33.0	33.0		33.0	33.0		36.0	36.0	36.0	36.0	36.0	
Effective Green, g (s)	33.0	33.0		33.0	33.0		36.0	36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.45	0.45	0.45	0.45	0.45	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	436	671		532	535		338	718	617	173	1364	
v/s Ratio Prot		0.01			0.02			c0.37			0.20	
v/s Ratio Perm	0.04			c0.04			0.03		0.03	0.13		
v/c Ratio	0.09	0.02		0.10	0.06		0.06	0.82	0.06	0.28	0.45	
Uniform Delay, d1	14.3	13.9		14.4	14.1		12.4	19.1	12.4	13.9	15.2	
Progression Factor	1.00	1.00		1.00	1.00		0.26	0.39	0.04	1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.4	0.2		0.3	9.2	0.2	4.1	1.1	
Delay (s)	14.7	14.0		14.7	14.4		3.6	16.7	0.7	17.9	16.2	
Level of Service	B	B		B	B		A	B	A	B	B	
Approach Delay (s)		14.4			14.5			14.4			16.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

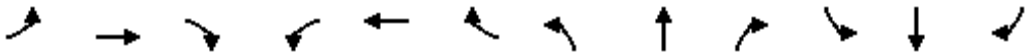
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	49	87	80	78	714	98	535
v/c Ratio	0.07	0.08	0.21	0.13	0.21	0.69	0.33	0.53
Control Delay	18.2	9.1	20.1	8.6	9.2	20.8	13.5	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	9.1	20.1	8.6	9.2	20.8	13.5	19.6
Queue Length 50th (m)	3.2	1.2	8.6	2.1	3.6	47.0	6.4	24.8
Queue Length 95th (m)	9.8	8.4	21.0	11.6	m4.7	65.0	12.5	27.3
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	475	590	405	600	380	1451	301	1437
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.21	0.13	0.21	0.49	0.33	0.37

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	12	34	82	22	54	73	584	87	92	467	36
Future Volume (vph)	32	12	34	82	22	54	73	584	87	92	467	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.89		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)	1738	1540		1442	1532		1574	2956		1544	2943	
Flt Permitted	0.70	1.00		0.73	1.00		0.40	1.00		0.28	1.00	
Satd. Flow (perm)	1290	1540		1101	1532		656	2956		447	2943	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	13	36	87	23	57	78	621	93	98	497	38
RTOR Reduction (vph)	0	23	0	0	36	0	0	19	0	0	9	0
Lane Group Flow (vph)	34	26	0	87	44	0	78	695	0	98	526	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	29.5	29.5		29.5	29.5		34.4	27.4		34.4	27.4	
Effective Green, g (s)	29.5	29.5		29.5	29.5		34.4	27.4		34.4	27.4	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.43	0.34		0.43	0.34	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	475	567		405	564		362	1012		288	1007	
v/s Ratio Prot		0.02			0.03		0.02	c0.24		c0.03	0.18	
v/s Ratio Perm	0.03			c0.08			0.07			0.12		
v/c Ratio	0.07	0.05		0.21	0.08		0.22	0.69		0.34	0.52	
Uniform Delay, d1	16.4	16.2		17.3	16.4		13.8	22.6		14.3	21.1	
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.82		1.06	0.87	
Incremental Delay, d2	0.3	0.2		1.2	0.3		1.0	2.9		3.1	1.9	
Delay (s)	16.7	16.4		18.5	16.7		12.6	21.5		18.2	20.2	
Level of Service	B	B		B	B		B	C		B	C	
Approach Delay (s)		16.5			17.6			20.6			19.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

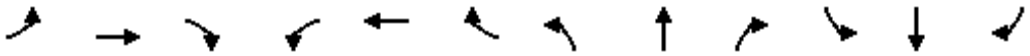
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	351	218	112	43	34	119	612	29	592
v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.38	0.59	0.09	0.61
Control Delay	34.2	15.0	18.0	23.9	0.3	15.9	23.8	11.6	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	15.0	18.0	23.9	0.3	15.9	23.8	11.6	26.7
Queue Length 50th (m)	39.8	11.1	10.6	5.0	0.0	7.4	26.5	2.8	41.7
Queue Length 95th (m)	#75.1	30.1	20.9	12.6	0.0	m15.9	44.5	m6.6	59.7
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	455	463	359	442	485	315	1036	336	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.47	0.31	0.10	0.07	0.38	0.59	0.09	0.61

Intersection Summary

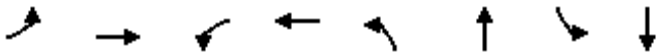
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	326	65	138	104	40	32	111	468	101	27	382	168
Future Volume (vph)	326	65	138	104	40	32	111	468	101	27	382	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1481		1491	1779	1484	1452	3121		1586	2800	
Flt Permitted	0.73	1.00		0.54	1.00	1.00	0.35	1.00		0.33	1.00	
Satd. Flow (perm)	1187	1481		850	1779	1484	531	3121		557	2800	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	351	70	148	112	43	34	119	503	109	29	411	181
RTOR Reduction (vph)	0	95	0	0	0	26	0	23	0	0	62	0
Lane Group Flow (vph)	351	123	0	112	43	8	119	589	0	29	530	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	33.0	26.0		33.0	26.0	
Actuated g/C Ratio	0.34	0.25		0.34	0.25	0.25	0.41	0.32		0.41	0.32	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	368		341	442	369	299	1014		319	910	
v/s Ratio Prot	c0.07	0.08		0.03	0.02		c0.03	0.19		0.01	c0.19	
v/s Ratio Perm	c0.20			0.08		0.01	0.13			0.03		
v/c Ratio	0.82	0.33		0.33	0.10	0.02	0.40	0.58		0.09	0.58	
Uniform Delay, d1	23.5	24.6		19.1	23.1	22.7	15.2	22.5		14.3	22.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.13	1.01		1.03	1.24	
Incremental Delay, d2	15.6	2.4		2.6	0.4	0.1	3.1	1.9		0.5	2.6	
Delay (s)	39.1	27.0		21.7	23.6	22.8	20.3	24.7		15.2	30.6	
Level of Service	D	C		C	C	C	C	C		B	C	
Approach Delay (s)		34.5			22.3			23.9			29.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

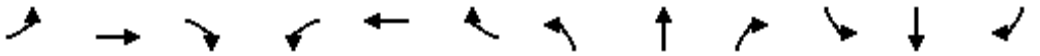
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	45	144	224	9	741	177	505
v/c Ratio	0.06	0.07	0.38	0.35	0.03	0.72	0.69	0.51
Control Delay	14.5	12.4	26.2	6.9	11.0	27.7	31.4	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	12.4	26.2	6.9	11.0	27.7	31.4	17.4
Queue Length 50th (m)	2.2	3.0	14.9	2.1	0.7	49.8	14.7	18.6
Queue Length 95th (m)	6.3	8.7	34.5	17.2	2.8	66.1	#38.3	33.9
Internal Link Dist (m)		260.4		114.4		529.3		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	444	670	384	637	338	1029	256	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.07	0.38	0.35	0.03	0.72	0.69	0.51

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	28	11	125	20	175	8	556	89	154	426	13
Future Volume (vph)	22	28	11	125	20	175	8	556	89	154	426	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.87		1.00	0.98		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)	1706	1708		1508	1514		1460	3119		1521	3043	
Flt Permitted	0.51	1.00		0.73	1.00		0.39	1.00		0.22	1.00	
Satd. Flow (perm)	908	1708		1155	1514		602	3119		352	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	25	32	13	144	23	201	9	639	102	177	490	15
RTOR Reduction (vph)	0	8	0	0	134	0	0	17	0	0	3	0
Lane Group Flow (vph)	25	37	0	144	90	0	9	724	0	177	502	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Effective Green, g (s)	33.4	33.4		26.6	26.6		30.6	23.6		30.6	23.6	
Actuated g/C Ratio	0.42	0.42		0.33	0.33		0.38	0.30		0.38	0.30	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	407	713		384	503		305	920		236	897	
v/s Ratio Prot	0.00	c0.02			0.06		0.00	c0.23		c0.07	0.17	
v/s Ratio Perm	0.02			c0.12			0.01			0.22		
v/c Ratio	0.06	0.05		0.38	0.18		0.03	0.79		0.75	0.56	
Uniform Delay, d1	14.0	13.9		20.4	18.9		15.4	25.9		18.1	23.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.33	0.72	
Incremental Delay, d2	0.0	0.1		2.8	0.8		0.2	6.8		17.2	2.2	
Delay (s)	14.0	14.0		23.1	19.7		15.6	32.6		41.3	19.2	
Level of Service	B	B		C	B		B	C		D	B	
Approach Delay (s)		14.0			21.1			32.4			25.0	
Approach LOS		B			C			C			C	

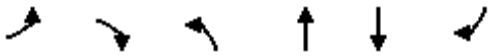
Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	25	675	4	12	433
Future Volume (Veh/h)	9	25	675	4	12	433
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	28	767	5	14	492
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1290	770			772	
vC1, stage 1 conf vol	770					
vC2, stage 2 conf vol	520					
vCu, unblocked vol	1290	770			772	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.2	
p0 queue free %	97	93			98	
cM capacity (veh/h)	367	394			852	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	38	772	14	492
Volume Left	10	0	14	0
Volume Right	28	5	0	0
cSH	387	1700	852	1700
Volume to Capacity	0.10	0.45	0.02	0.29
Queue Length 95th (m)	2.5	0.0	0.4	0.0
Control Delay (s)	15.3	0.0	9.3	0.0
Lane LOS	C		A	
Approach Delay (s)	15.3	0.0	0.3	
Approach LOS	C			

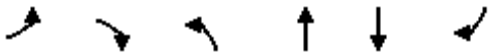
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	29	10	650	428	13
Future Volume (Veh/h)	34	29	10	650	428	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	39	33	11	739	486	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				400		
pX, platoon unblocked	0.74					
vC, conflicting volume	1247	486	501			
vC1, stage 1 conf vol	486					
vC2, stage 2 conf vol	761					
vCu, unblocked vol	1158	486	501			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4	2.4			
p0 queue free %	89	94	99			
cM capacity (veh/h)	371	554	968			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	72	11	739	486	15
Volume Left	39	11	0	0	0
Volume Right	33	0	0	0	15
cSH	437	968	1700	1700	1700
Volume to Capacity	0.16	0.01	0.43	0.29	0.01
Queue Length 95th (m)	4.4	0.3	0.0	0.0	0.0
Control Delay (s)	14.8	8.8	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	14.8	0.1		0.0	
Approach LOS	B				

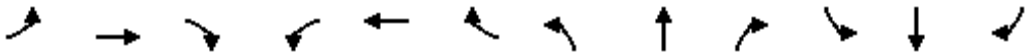
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	20	8	629	450	7
Future Volume (Veh/h)	29	20	8	629	450	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	32	22	9	691	495	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				204		
pX, platoon unblocked	0.73					
vC, conflicting volume	1208	499	503			
vC1, stage 1 conf vol	499					
vC2, stage 2 conf vol	709					
vCu, unblocked vol	1098	499	503			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4	2.2			
p0 queue free %	92	96	99			
cM capacity (veh/h)	383	560	1072			

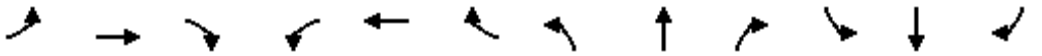
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	54	9	691	503
Volume Left	32	9	0	0
Volume Right	22	0	0	8
cSH	439	1072	1700	1700
Volume to Capacity	0.12	0.01	0.41	0.30
Queue Length 95th (m)	3.2	0.2	0.0	0.0
Control Delay (s)	14.3	8.4	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.3	0.1		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



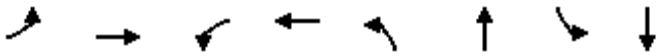
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	467	116	70	467	70	70	623	70	70	424	70
v/c Ratio	0.51	0.88	0.26	0.48	0.89	0.14	0.18	0.70	0.08	0.22	0.48	0.10
Control Delay	44.2	69.2	15.9	42.0	71.2	6.8	16.7	34.6	3.9	17.2	27.6	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	69.2	15.9	42.0	71.2	6.8	16.7	34.6	3.9	17.2	27.6	4.1
Queue Length 50th (m)	13.3	131.1	8.5	13.3	131.5	0.0	9.4	152.1	0.0	9.3	88.2	0.0
Queue Length 95th (m)	24.1	166.9	23.4	23.9	168.7	9.8	17.6	200.1	7.3	17.3	119.0	7.5
Internal Link Dist (m)		290.6			77.2			83.6			180.1	
Turn Bay Length (m)	35.0		30.0	35.0		25.0	35.0		30.0	35.0		30.0
Base Capacity (vph)	137	610	497	147	598	561	396	905	895	317	891	691
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.77	0.23	0.48	0.78	0.12	0.18	0.69	0.08	0.22	0.48	0.10

Intersection Summary



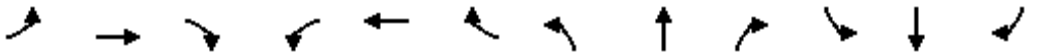
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	430	107	64	430	64	64	573	64	64	390	64
Future Volume (vph)	64	430	107	64	430	64	64	573	64	64	390	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	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)	1630	1883	1372	1789	1883	1601	1508	1685	1601	1789	1671	1228
Flt Permitted	0.10	1.00	1.00	0.11	1.00	1.00	0.39	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	170	1883	1372	204	1883	1601	623	1685	1601	461	1671	1228
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	467	116	70	467	70	70	623	70	70	424	70
RTOR Reduction (vph)	0	0	55	0	0	50	0	0	34	0	0	34
Lane Group Flow (vph)	70	467	61	70	467	20	70	623	36	70	424	36
Heavy Vehicles (%)	12%	2%	19%	2%	2%	2%	21%	14%	2%	2%	15%	33%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.2	42.2	42.2	48.2	41.7	41.7	83.4	77.5	77.5	82.2	76.9	76.9
Effective Green, g (s)	49.2	42.2	42.2	48.2	41.7	41.7	83.4	77.5	77.5	82.2	76.9	76.9
Actuated g/C Ratio	0.33	0.28	0.28	0.32	0.28	0.28	0.56	0.52	0.52	0.55	0.51	0.51
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	124	531	387	134	525	446	382	873	829	300	859	631
v/s Ratio Prot	c0.03	c0.25		0.02	0.25		0.01	c0.37		c0.01	0.25	
v/s Ratio Perm	0.16		0.04	0.15		0.01	0.09		0.02	0.12		0.03
v/c Ratio	0.56	0.88	0.16	0.52	0.89	0.04	0.18	0.71	0.04	0.23	0.49	0.06
Uniform Delay, d1	39.3	51.2	40.3	39.6	51.7	39.3	16.6	27.5	17.7	19.8	23.6	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	15.3	0.2	3.6	16.7	0.0	0.2	4.9	0.1	0.4	2.0	0.2
Delay (s)	45.1	66.5	40.5	43.2	68.4	39.4	16.8	32.5	17.8	20.2	25.7	18.3
Level of Service	D	E	D	D	E	D	B	C	B	C	C	B
Approach Delay (s)		59.6			62.1			29.7			24.1	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	52	13	35	23	604	30	423
v/c Ratio	0.41	0.27	0.09	0.18	0.03	0.44	0.05	0.31
Control Delay	47.1	36.9	36.2	35.4	2.5	4.1	2.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	36.9	36.2	35.4	2.5	4.1	2.6	3.2
Queue Length 50th (m)	8.4	7.7	2.1	5.2	0.6	24.0	0.8	13.9
Queue Length 95th (m)	18.6	17.4	7.1	13.2	2.4	49.0	3.0	29.1
Internal Link Dist (m)		257.8		267.7		353.6		439.3
Turn Bay Length (m)	25.0		25.0		25.0		25.0	
Base Capacity (vph)	244	374	273	376	775	1387	644	1365
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.14	0.05	0.09	0.03	0.44	0.05	0.31

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	43	5	12	29	3	22	561	6	28	365	33
Future Volume (vph)	48	43	5	12	29	3	22	561	6	28	365	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00		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)	1573	1842		1789	1859		1738	1670		1789	1640	
Flt Permitted	0.73	1.00		0.72	1.00		0.51	1.00		0.41	1.00	
Satd. Flow (perm)	1216	1842		1362	1859		934	1670		775	1640	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	51	47	5	13	32	3	23	597	7	30	388	35
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	0	0	2	0
Lane Group Flow (vph)	51	47	0	13	32	0	23	604	0	30	421	0
Heavy Vehicles (%)	16%	2%	10%	2%	2%	2%	5%	15%	2%	2%	16%	12%
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)	8.0	8.0		8.0	8.0		73.0	73.0		73.0	73.0	
Effective Green, g (s)	8.0	8.0		8.0	8.0		73.0	73.0		73.0	73.0	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.81	0.81		0.81	0.81	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	108	163		121	165		757	1354		628	1330	
v/s Ratio Prot		0.03			0.02			c0.36			0.26	
v/s Ratio Perm	c0.04			0.01			0.02			0.04		
v/c Ratio	0.47	0.29		0.11	0.20		0.03	0.45		0.05	0.32	
Uniform Delay, d1	39.0	38.3		37.7	38.0		1.6	2.5		1.7	2.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	1.0		0.4	0.6		0.1	1.1		0.1	0.6	
Delay (s)	42.2	39.3		38.1	38.6		1.7	3.6		1.8	2.8	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		40.8			38.5			3.5			2.7	
Approach LOS		D			D			A			A	

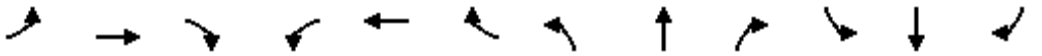
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	145	635	68	13	526	42	35	427	58	212	118
v/c Ratio	0.37	0.92	0.10	0.05	0.46	0.07	0.10	0.85	0.29	0.40	0.23
Control Delay	17.1	49.9	1.8	13.0	25.5	0.3	25.7	58.5	28.9	37.7	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	49.9	1.8	13.0	25.5	0.3	25.7	58.5	28.9	37.7	7.7
Queue Length 50th (m)	16.8	130.3	0.0	1.4	45.8	0.0	4.7	91.4	7.9	38.8	0.0
Queue Length 95th (m)	27.4	#248.8	3.7	4.3	60.3	0.0	13.0	#172.9	19.4	70.4	14.6
Internal Link Dist (m)		208.9			217.2			306.0		353.6	
Turn Bay Length (m)	50.0		25.0	46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	396	737	720	249	1458	694	362	500	202	532	511
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.86	0.09	0.05	0.36	0.06	0.10	0.85	0.29	0.40	0.23

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	577	70	12	484	39	32	369	24	53	195	109
Future Volume (vph)	133	577	70	12	484	39	32	369	24	53	195	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1470	1337	1460	2765	1228	1472	1679		1508	1685	1361
Flt Permitted	0.38	1.00	1.00	0.18	1.00	1.00	0.57	1.00		0.22	1.00	1.00
Satd. Flow (perm)	653	1470	1337	277	2765	1228	890	1679		351	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	627	76	13	526	42	35	401	26	58	212	118
RTOR Reduction (vph)	0	1	37	0	0	24	0	1	0	0	0	82
Lane Group Flow (vph)	145	634	31	13	526	18	35	426	0	58	212	36
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	62.1	55.0	55.0	55.1	51.5	51.5	39.4	35.5		42.2	36.9	36.9
Effective Green, g (s)	62.1	55.0	55.0	55.1	51.5	51.5	39.4	35.5		42.2	36.9	36.9
Actuated g/C Ratio	0.51	0.46	0.46	0.46	0.43	0.43	0.33	0.29		0.35	0.31	0.31
Clearance Time (s)	4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
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)	393	669	608	161	1178	523	309	493		173	514	415
v/s Ratio Prot	c0.02	c0.43		0.00	0.19		0.00	c0.25		c0.01	0.13	
v/s Ratio Perm	0.17		0.02	0.03		0.01	0.03			0.10		0.03
v/c Ratio	0.37	0.95	0.05	0.08	0.45	0.03	0.11	0.86		0.34	0.41	0.09
Uniform Delay, d1	16.1	31.5	18.3	21.5	24.6	20.2	28.1	40.4		28.6	33.3	29.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	22.6	0.0	0.2	0.3	0.0	0.2	17.9		1.2	2.4	0.4
Delay (s)	16.7	54.2	18.4	21.8	24.8	20.2	28.3	58.2		29.7	35.8	30.3
Level of Service	B	D	B	C	C	C	C	E		C	D	C
Approach Delay (s)		44.9			24.4			56.0			33.2	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.8	Sum of lost time (s)	21.4
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



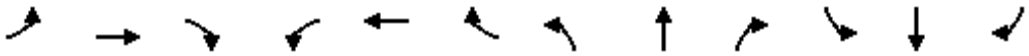
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	119	339	25	65	198
Future Volume (Veh/h)	9	119	339	25	65	198
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	127	361	27	69	211
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	724	374			388	
vC1, stage 1 conf vol	374					
vC2, stage 2 conf vol	349					
vCu, unblocked vol	724	374			388	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	98	80			94	
cM capacity (veh/h)	540	648			1149	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	10	127	388	69	211
Volume Left	10	0	0	69	0
Volume Right	0	127	27	0	0
cSH	540	648	1700	1149	1700
Volume to Capacity	0.02	0.20	0.23	0.06	0.12
Queue Length 95th (m)	0.4	5.5	0.0	1.5	0.0
Control Delay (s)	11.8	11.9	0.0	8.3	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.9		0.0	2.1	
Approach LOS	B				

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
101: Malden Road & Todd Lane

08/05/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	3	3	552	0	40	2	282	439	46	561	2
Future Volume (veh/h)	3	3	3	552	0	40	2	282	439	46	561	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	3	3	581	0	42	2	297	462	48	591	2
Approach Volume (veh/h)		9			623			761			641	
Crossing Volume (veh/h)		1220#			302			54			583	
High Capacity (veh/h)		519			1093			1328			873	
High v/c (veh/h)		0.02			0.57			0.57			0.73	
Low Capacity (veh/h)		395			897			1109			701	
Low v/c (veh/h)		0.02			0.69			0.69			0.91	

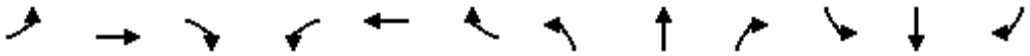
Intersection Summary				
Maximum v/c High	0.73			
Maximum v/c Low	0.91			
Intersection Capacity Utilization	111.3%	ICU Level of Service	H	
# Crossing flow exceeds 1200, method is not applicable				



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	71	169	59	35	664	149	87	946
v/c Ratio	0.15	0.11	0.37	0.11	0.15	0.83	0.20	0.49	0.62
Control Delay	23.1	10.8	25.5	9.4	5.6	15.4	0.8	22.6	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Total Delay	23.1	10.8	25.5	9.4	5.6	16.3	0.8	22.6	16.3
Queue Length 50th (m)	6.9	2.5	20.8	1.1	0.0	18.3	0.0	8.3	50.6
Queue Length 95th (m)	17.3	12.0	41.4	9.6	m1.7	23.8	m1.2	19.8	58.6
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	395	653	457	531	271	939	868	206	1788
Starvation Cap Reductn	0	0	0	0	0	94	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.11	0.37	0.11	0.13	0.79	0.17	0.42	0.53

Intersection Summary

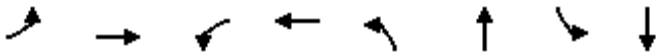
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	22	45	159	9	46	33	624	140	82	826	63
Future Volume (vph)	57	22	45	159	9	46	33	624	140	82	826	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.88		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1417	1688		1659	1359		1948	1597	1372	1484	3031	
Flt Permitted	0.72	1.00		0.71	1.00		0.23	1.00	1.00	0.22	1.00	
Satd. Flow (perm)	1071	1688		1241	1359		462	1597	1372	351	3031	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	61	23	48	169	10	49	35	664	149	87	879	67
RTOR Reduction (vph)	0	30	0	0	31	0	0	0	74	0	8	0
Lane Group Flow (vph)	61	41	0	169	28	0	35	664	75	87	938	0
Heavy Vehicles (%)	26%	0%	0%	10%	0%	22%	5%	15%	19%	23%	20%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.3	31.3		31.3	31.3		42.7	42.7	42.7	42.7	42.7	
Effective Green, g (s)	31.3	31.3		31.3	31.3		42.7	42.7	42.7	42.7	42.7	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	394	621		456	500		232	802	689	176	1522	
v/s Ratio Prot		0.02			0.02			c0.42			0.31	
v/s Ratio Perm	0.06			c0.14			0.08		0.05	0.25		
v/c Ratio	0.15	0.07		0.37	0.06		0.15	0.83	0.11	0.49	0.62	
Uniform Delay, d1	18.0	17.4		19.6	17.3		11.4	18.0	11.1	14.0	15.2	
Progression Factor	1.00	1.00		1.00	1.00		0.48	0.41	0.23	1.00	1.00	
Incremental Delay, d2	0.8	0.2		2.3	0.2		1.2	8.3	0.3	9.6	1.9	
Delay (s)	18.8	17.6		21.9	17.5		6.6	15.6	2.8	23.6	17.1	
Level of Service	B	B		C	B		A	B	A	C	B	
Approach Delay (s)		18.2			20.8			13.0			17.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

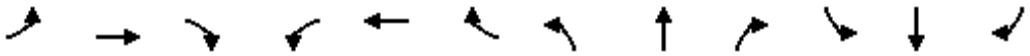
c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	211	289	152	115	930	141	896
v/c Ratio	0.13	0.35	0.97	0.26	0.43	0.79	0.55	0.77
Control Delay	23.9	11.8	78.1	14.2	9.7	21.7	20.9	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	11.8	78.1	14.2	9.7	21.7	20.9	22.9
Queue Length 50th (m)	5.8	8.9	45.7	8.8	5.4	71.3	10.2	42.3
Queue Length 95th (m)	15.9	29.0	#108.3	25.7	m4.3	m67.6	18.6	44.5
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	404	604	299	577	270	1538	256	1526
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	36	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.35	0.97	0.26	0.43	0.62	0.55	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	57	141	272	60	83	108	705	169	133	787	55
Future Volume (vph)	49	57	141	272	60	83	108	705	169	133	787	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.91		1.00	0.97		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)	1738	1543		1442	1580		1574	2931		1544	2944	
Flt Permitted	0.66	1.00		0.59	1.00		0.20	1.00		0.19	1.00	
Satd. Flow (perm)	1208	1543		893	1580		337	2931		305	2944	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	52	61	150	289	64	88	115	750	180	141	837	59
RTOR Reduction (vph)	0	88	0	0	49	0	0	31	0	0	8	0
Lane Group Flow (vph)	52	123	0	289	103	0	115	899	0	141	888	0
Heavy Vehicles (%)	5%	12%	4%	21%	7%	14%	7%	16%	14%	13%	21%	7%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.5	28.5		28.5	28.5		40.4	33.4		40.4	33.4	
Effective Green, g (s)	28.5	28.5		28.5	28.5		40.4	33.4		40.4	33.4	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.48	0.39		0.48	0.39	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	405	517		299	529		262	1151		247	1156	
v/s Ratio Prot		0.08			0.07		0.04	c0.31		c0.05	0.30	
v/s Ratio Perm	0.04			c0.32			0.17			0.22		
v/c Ratio	0.13	0.24		0.97	0.19		0.44	0.78		0.57	0.77	
Uniform Delay, d1	19.6	20.4		27.8	20.1		13.7	22.6		14.3	22.4	
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.89		1.54	0.86	
Incremental Delay, d2	0.7	1.1		44.2	0.8		3.1	3.2		8.3	4.4	
Delay (s)	20.3	21.5		72.0	20.9		14.3	23.3		30.2	23.7	
Level of Service	C	C		E	C		B	C		C	C	
Approach Delay (s)		21.3			54.4			22.4			24.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



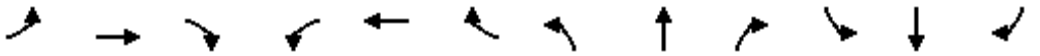
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	412	384	310	180	53	171	729	39	1121
v/c Ratio	1.10	0.90	1.50	0.43	0.12	0.87	0.63	0.13	1.04
Control Delay	105.5	49.7	270.7	31.6	0.5	60.8	21.0	11.0	64.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.5	49.7	270.7	31.6	0.5	60.8	21.0	11.0	64.5
Queue Length 50th (m)	~63.5	46.0	~54.9	25.0	0.0	21.0	29.7	3.7	~104.3
Queue Length 95th (m)	#129.9	#97.1	#104.6	43.6	0.0	m#34.6	49.4	m5.1	m#100.9
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	373	427	207	416	459	196	1160	310	1078
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.90	1.50	0.43	0.12	0.87	0.63	0.13	1.04

Intersection Summary

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

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

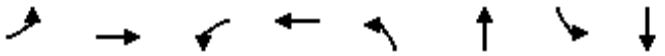
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	127	230	288	167	49	159	546	132	36	729	313
Future Volume (vph)	383	127	230	288	167	49	159	546	132	36	729	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1547	1497		1491	1779	1484	1452	3114		1586	2803	
Flt Permitted	0.59	1.00		0.21	1.00	1.00	0.13	1.00		0.28	1.00	
Satd. Flow (perm)	967	1497		335	1779	1484	197	3114		459	2803	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	412	137	247	310	180	53	171	587	142	39	784	337
RTOR Reduction (vph)	0	77	0	0	0	41	0	25	0	0	57	0
Lane Group Flow (vph)	412	307	0	310	180	12	171	704	0	39	1064	0
Heavy Vehicles (%)	18%	5%	22%	17%	8%	10%	16%	14%	13%	10%	18%	21%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Actuated g/C Ratio	0.32	0.23		0.32	0.23	0.23	0.45	0.36		0.45	0.36	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	353	350		201	416	347	191	1135		298	1022	
v/s Ratio Prot	0.10	0.21		c0.13	0.10		c0.07	0.23		0.01	c0.38	
v/s Ratio Perm	0.27			c0.36		0.01	0.33			0.05		
v/c Ratio	1.17	0.88		1.54	0.43	0.04	0.90	0.62		0.13	1.04	
Uniform Delay, d1	28.2	31.4		26.7	27.7	25.1	18.1	22.2		13.7	27.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	2.06	0.90		1.01	1.16	
Incremental Delay, d2	101.6	25.4		267.3	3.3	0.2	33.7	1.8		0.7	36.1	
Delay (s)	129.7	56.8		293.9	31.0	25.3	71.0	21.8		14.6	67.4	
Level of Service	F	E		F	C	C	E	C		B	E	
Approach Delay (s)		94.5			180.6			31.1			65.6	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	81.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



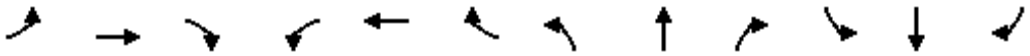
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	81	346	272	30	905	185	1106
v/c Ratio	0.09	0.13	1.08	0.45	0.15	0.78	0.81	0.99
Control Delay	16.9	12.4	107.3	8.3	12.0	29.1	23.2	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	12.4	107.3	8.3	12.0	29.1	23.2	34.4
Queue Length 50th (m)	3.3	5.0	~73.4	4.1	2.3	65.7	18.4	76.8
Queue Length 95th (m)	8.4	13.2	#117.2	21.4	6.0	84.1	m15.2	m64.3
Internal Link Dist (m)		260.4		114.4		529.3		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	365	626	321	606	201	1153	227	1112
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.13	1.08	0.45	0.15	0.78	0.81	0.99

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	42	29	301	28	209	26	667	120	161	935	27
Future Volume (vph)	29	42	29	301	28	209	26	667	120	161	935	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.98		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)	1706	1660		1508	1519		1460	3116		1521	3043	
Flt Permitted	0.41	1.00		0.70	1.00		0.14	1.00		0.16	1.00	
Satd. Flow (perm)	734	1660		1118	1519		209	3116		264	3043	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	33	48	33	346	32	240	30	767	138	185	1075	31
RTOR Reduction (vph)	0	20	0	0	171	0	0	18	0	0	3	0
Lane Group Flow (vph)	33	61	0	346	101	0	30	887	0	185	1103	0
Heavy Vehicles (%)	7%	5%	14%	21%	8%	10%	25%	16%	6%	20%	20%	0%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	32.6	32.6		24.4	24.4		36.4	29.4		36.4	29.4	
Effective Green, g (s)	32.6	32.6		24.4	24.4		36.4	29.4		36.4	29.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29		0.43	0.35		0.43	0.35	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	329	636		320	436		192	1077		216	1052	
v/s Ratio Prot	0.00	c0.04			0.07		0.01	0.28		c0.07	c0.36	
v/s Ratio Perm	0.03			c0.31			0.05			0.30		
v/c Ratio	0.10	0.10		1.08	0.23		0.16	0.82		0.86	1.05	
Uniform Delay, d1	16.9	16.8		30.3	23.1		16.8	25.4		17.6	27.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.39	0.96	
Incremental Delay, d2	0.0	0.3		73.7	1.2		1.7	7.2		4.2	24.9	
Delay (s)	17.0	17.1		104.0	24.4		18.5	32.6		28.7	51.6	
Level of Service	B	B		F	C		B	C		C	D	
Approach Delay (s)		17.0			69.0			32.2			48.4	
Approach LOS		B			E			C			D	

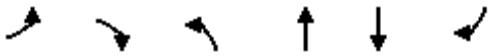
Intersection Summary			
HCM 2000 Control Delay	46.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	26	777	13	25	1031
Future Volume (Veh/h)	12	26	777	13	25	1031
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	14	30	883	15	28	1172
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2118	890			898	
vC1, stage 1 conf vol	890					
vC2, stage 2 conf vol	1228					
vCu, unblocked vol	2118	890			898	
tC, single (s)	6.6	6.3			4.1	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.2	
p0 queue free %	93	91			96	
cM capacity (veh/h)	207	336			765	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	44	898	28	1172
Volume Left	14	0	28	0
Volume Right	30	15	0	0
cSH	280	1700	765	1700
Volume to Capacity	0.16	0.53	0.04	0.69
Queue Length 95th (m)	4.2	0.0	0.9	0.0
Control Delay (s)	20.2	0.0	9.9	0.0
Lane LOS	C		A	
Approach Delay (s)	20.2	0.0	0.2	
Approach LOS	C			

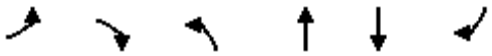
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	60	34	751	981	53
Future Volume (Veh/h)	34	60	34	751	981	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	39	68	39	853	1115	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				400		
pX, platoon unblocked	0.63					
vC, conflicting volume	2046	1115	1175			
vC1, stage 1 conf vol	1115					
vC2, stage 2 conf vol	931					
vCu, unblocked vol	2361	1115	1175			
tC, single (s)	6.5	6.4	4.3			
tC, 2 stage (s)	5.5					
tF (s)	3.6	3.4	2.4			
p0 queue free %	81	71	93			
cM capacity (veh/h)	208	237	528			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	107	39	853	1115	60
Volume Left	39	39	0	0	0
Volume Right	68	0	0	0	60
cSH	226	528	1700	1700	1700
Volume to Capacity	0.47	0.07	0.50	0.66	0.04
Queue Length 95th (m)	17.8	1.8	0.0	0.0	0.0
Control Delay (s)	34.6	12.4	0.0	0.0	0.0
Lane LOS	D	B			
Approach Delay (s)	34.6	0.5		0.0	
Approach LOS	D				

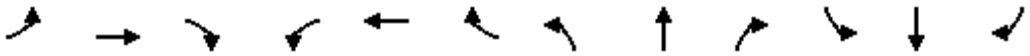
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	63.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	17	20	753	975	37
Future Volume (Veh/h)	40	17	20	753	975	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	19	22	827	1071	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)				204		
pX, platoon unblocked	0.59					
vC, conflicting volume	1962	1092	1112			
vC1, stage 1 conf vol	1092					
vC2, stage 2 conf vol	871					
vCu, unblocked vol	2287	1092	1112			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4	2.2			
p0 queue free %	80	93	97			
cM capacity (veh/h)	219	254	635			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	63	22	827	1112
Volume Left	44	22	0	0
Volume Right	19	0	0	41
cSH	229	635	1700	1700
Volume to Capacity	0.28	0.03	0.49	0.65
Queue Length 95th (m)	8.2	0.8	0.0	0.0
Control Delay (s)	26.6	10.9	0.0	0.0
Lane LOS	D	B		
Approach Delay (s)	26.6	0.3		0.0
Approach LOS	D			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

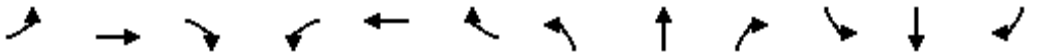


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	726	109	109	726	109	109	754	109	109	908	109
v/c Ratio	0.80	1.38	0.24	0.72	1.38	0.21	0.86	0.97	0.14	0.66	1.17	0.17
Control Delay	65.2	215.3	7.8	52.9	215.3	7.4	69.4	54.6	4.0	33.1	120.3	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	215.3	7.8	52.9	215.3	7.4	69.4	54.6	4.0	33.1	120.3	4.3
Queue Length 50th (m)	15.5	~205.2	0.6	15.4	~205.2	0.6	10.7	151.3	0.5	10.5	~231.1	0.5
Queue Length 95th (m)	#37.8	#274.8	13.4	#33.5	#274.8	13.3	#41.9	#231.8	9.6	#23.8	#304.7	9.8
Internal Link Dist (m)		290.6			77.2			83.6			180.1	
Turn Bay Length (m)	35.0		30.0	35.0		30.0	35.0		30.0	35.0		30.0
Base Capacity (vph)	137	526	459	151	526	523	127	780	798	165	774	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.38	0.24	0.72	1.38	0.21	0.86	0.97	0.14	0.66	1.17	0.17

Intersection Summary

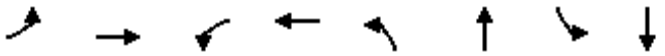
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



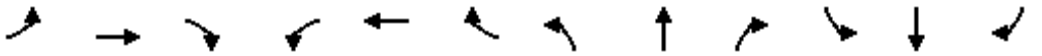
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	668	100	100	668	100	100	694	100	100	835	100
Future Volume (vph)	100	668	100	100	668	100	100	694	100	100	835	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	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)	1630	1883	1372	1789	1883	1601	1508	1685	1601	1789	1671	1228
Flt Permitted	0.13	1.00	1.00	0.13	1.00	1.00	0.08	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	225	1883	1372	247	1883	1601	126	1685	1601	182	1671	1228
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	726	109	109	726	109	109	754	109	109	908	109
RTOR Reduction (vph)	0	0	76	0	0	76	0	0	56	0	0	56
Lane Group Flow (vph)	109	726	33	109	726	33	109	754	53	109	908	53
Heavy Vehicles (%)	12%	2%	19%	2%	2%	2%	21%	14%	2%	2%	15%	33%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	35.5	30.5	30.5	35.5	30.5	30.5	55.5	50.5	50.5	55.5	50.5	50.5
Effective Green, g (s)	35.5	30.5	30.5	35.5	30.5	30.5	55.5	50.5	50.5	55.5	50.5	50.5
Actuated g/C Ratio	0.33	0.28	0.28	0.33	0.28	0.28	0.51	0.46	0.46	0.51	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	137	526	383	151	526	447	127	780	741	166	774	568
v/s Ratio Prot	c0.04	c0.39		0.03	0.39		c0.04	0.45		0.03	c0.54	
v/s Ratio Perm	0.22		0.02	0.20		0.02	0.40		0.03	0.30		0.04
v/c Ratio	0.80	1.38	0.09	0.72	1.38	0.07	0.86	0.97	0.07	0.66	1.17	0.09
Uniform Delay, d1	31.0	39.2	29.0	29.8	39.2	28.9	24.8	28.4	16.2	21.7	29.2	16.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.5	182.7	0.1	15.6	182.7	0.1	40.1	25.1	0.2	9.0	91.3	0.3
Delay (s)	57.4	222.0	29.1	45.4	222.0	28.9	64.9	53.5	16.4	30.7	120.6	16.7
Level of Service	E	F	C	D	F	C	E	D	B	C	F	B
Approach Delay (s)		180.7			179.3			50.6			101.8	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	126.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	45	89	9	66	54	752	55	956
v/c Ratio	0.37	0.45	0.07	0.34	0.14	0.54	0.10	0.70
Control Delay	44.9	41.8	35.5	38.2	3.6	5.3	3.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	41.8	35.5	38.2	3.6	5.3	3.0	8.4
Queue Length 50th (m)	7.4	13.7	1.4	9.8	1.6	35.9	1.6	59.2
Queue Length 95th (m)	17.1	26.6	5.5	21.0	5.3	71.5	4.9	128.3
Internal Link Dist (m)		257.8		267.7		353.6		439.3
Turn Bay Length (m)	25.0		25.0		25.0		25.0	
Base Capacity (vph)	237	375	264	377	377	1383	528	1365
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.24	0.03	0.18	0.14	0.54	0.10	0.70

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	74	8	8	54	6	51	695	12	51	857	41
Future Volume (vph)	42	74	8	8	54	6	51	695	12	51	857	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	1.00		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)	1573	1840		1789	1853		1738	1669		1789	1647	
Flt Permitted	0.71	1.00		0.70	1.00		0.25	1.00		0.34	1.00	
Satd. Flow (perm)	1182	1840		1317	1853		456	1669		639	1647	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	45	80	9	9	59	7	54	739	13	55	912	44
RTOR Reduction (vph)	0	5	0	0	5	0	0	0	0	0	1	0
Lane Group Flow (vph)	45	84	0	9	61	0	54	752	0	55	955	0
Heavy Vehicles (%)	16%	2%	10%	2%	2%	2%	5%	15%	2%	2%	16%	12%
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)	8.2	8.2		8.2	8.2		72.8	72.8		72.8	72.8	
Effective Green, g (s)	8.2	8.2		8.2	8.2		72.8	72.8		72.8	72.8	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.81	0.81		0.81	0.81	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	107	167		119	168		368	1350		516	1332	
v/s Ratio Prot		c0.05			0.03			0.45			c0.58	
v/s Ratio Perm	0.04			0.01			0.12			0.09		
v/c Ratio	0.42	0.50		0.08	0.36		0.15	0.56		0.11	0.72	
Uniform Delay, d1	38.7	38.9		37.4	38.4		1.9	3.0		1.8	3.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	2.3		0.3	1.3		0.8	1.7		0.4	3.3	
Delay (s)	41.3	41.3		37.7	39.8		2.7	4.7		2.2	7.2	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		41.3			39.5			4.5			7.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

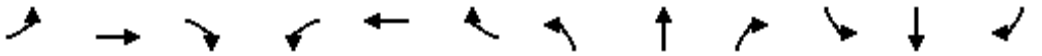


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	164	824	178	74	851	96	41	457	113	573	212
v/c Ratio	0.73	1.50	0.32	0.45	0.92	0.20	0.22	0.74	0.44	0.88	0.36
Control Delay	41.6	264.3	15.5	29.0	57.4	6.2	21.9	44.1	26.2	54.6	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	264.3	15.5	29.0	57.4	6.2	21.9	44.1	26.2	54.6	15.7
Queue Length 50th (m)	24.2	~297.5	13.9	10.4	108.6	0.0	5.6	101.3	16.3	141.0	17.4
Queue Length 95th (m)	#45.1	#372.5	32.3	19.8	#145.8	11.2	12.1	142.5	28.1	#211.2	38.1
Internal Link Dist (m)		208.9			217.2			306.0		353.6	
Turn Bay Length (m)	50.0		25.0	46.0		46.0	45.0		81.0		46.0
Base Capacity (vph)	225	551	565	163	960	492	187	617	254	650	594
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.50	0.32	0.45	0.89	0.20	0.22	0.74	0.44	0.88	0.36

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	758	164	68	783	88	38	389	31	104	527	195
Future Volume (vph)	151	758	164	68	783	88	38	389	31	104	527	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1549	1408	1460	2765	1228	1472	1675		1508	1685	1361
Flt Permitted	0.16	1.00	1.00	0.09	1.00	1.00	0.18	1.00		0.27	1.00	1.00
Satd. Flow (perm)	271	1549	1408	141	2765	1228	273	1675		433	1685	1361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	164	824	178	74	851	96	41	423	34	113	573	212
RTOR Reduction (vph)	0	0	65	0	0	64	0	2	0	0	0	70
Lane Group Flow (vph)	164	824	113	74	851	32	41	455	0	113	573	142
Heavy Vehicles (%)	11%	24%	16%	25%	32%	33%	24%	13%	19%	21%	14%	20%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	55.5	45.6	45.6	51.5	43.6	43.6	53.5	48.0		56.5	49.5	49.5
Effective Green, g (s)	55.5	45.6	45.6	51.5	43.6	43.6	53.5	48.0		56.5	49.5	49.5
Actuated g/C Ratio	0.43	0.35	0.35	0.40	0.34	0.34	0.41	0.37		0.43	0.38	0.38
Clearance Time (s)	4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
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)	220	543	494	136	928	412	163	618		246	642	518
v/s Ratio Prot	c0.06	c0.53		0.03	0.31		0.01	0.27		c0.02	c0.34	
v/s Ratio Perm	0.26		0.08	0.18		0.03	0.09			0.17		0.10
v/c Ratio	0.75	1.52	0.23	0.54	0.92	0.08	0.25	0.74		0.46	0.89	0.27
Uniform Delay, d1	26.8	42.2	29.7	31.3	41.4	29.4	26.6	35.5		24.7	37.7	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.8	242.2	0.2	4.4	13.5	0.1	0.8	7.6		1.4	17.2	1.3
Delay (s)	39.6	284.4	30.0	35.7	54.9	29.5	27.4	43.1		26.0	54.9	29.1
Level of Service	D	F	C	D	D	C	C	D		C	D	C
Approach Delay (s)		211.1			51.1			41.8			45.2	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	100.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	129.9	Sum of lost time (s)	21.4
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



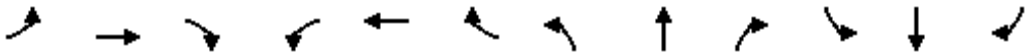
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	91	380	65	250	435
Future Volume (Veh/h)	22	91	380	65	250	435
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	97	404	69	266	463
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (m)						330
pX, platoon unblocked						
vC, conflicting volume	1434	438			473	
vC1, stage 1 conf vol	438					
vC2, stage 2 conf vol	995					
vCu, unblocked vol	1434	438			473	
tC, single (s)	6.6	6.3			4.2	
tC, 2 stage (s)	5.6					
tF (s)	3.6	3.4			2.3	
p0 queue free %	90	84			75	
cM capacity (veh/h)	238	596			1068	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	23	97	473	266	463
Volume Left	23	0	0	266	0
Volume Right	0	97	69	0	0
cSH	238	596	1700	1068	1700
Volume to Capacity	0.10	0.16	0.28	0.25	0.27
Queue Length 95th (m)	2.4	4.4	0.0	7.5	0.0
Control Delay (s)	21.7	12.2	0.0	9.5	0.0
Lane LOS	C	B		A	
Approach Delay (s)	14.0		0.0	3.5	
Approach LOS	B				

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
101: Malden Road & Todd Lane

08/11/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	3	3	552	0	40	2	332	516	66	802	3
Future Volume (veh/h)	3	3	3	552	0	40	2	332	516	66	802	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3	3	3	594	0	43	2	357	555	71	862	3
Approach Volume (veh/h)		9			637			914			936	
Crossing Volume (veh/h)		1527#			362			77			596	
High Capacity (veh/h)		402			1042			1304			864	
High v/c (veh/h)		0.02			0.61			0.70			1.08	
Low Capacity (veh/h)		297			851			1088			693	
Low v/c (veh/h)		0.03			0.75			0.84			1.35	

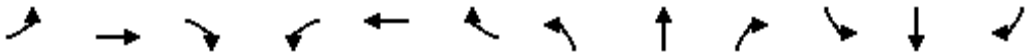
Intersection Summary				
Maximum v/c High	1.08			
Maximum v/c Low	1.35			
Intersection Capacity Utilization	139.9%	ICU Level of Service	H	
# Crossing flow exceeds 1200, method is not applicable				



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	70	167	57	41	773	174	123	1337
v/c Ratio	0.17	0.13	0.44	0.12	0.32	0.88	0.20	0.71	0.75
Control Delay	24.5	11.5	29.0	9.6	10.2	17.8	0.7	38.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	11.5	29.0	9.6	10.2	17.8	0.7	38.5	17.1
Queue Length 50th (m)	7.3	2.7	22.4	1.0	1.5	27.2	0.0	12.5	73.4
Queue Length 95th (m)	16.9	12.0	41.5	9.4	m2.3	#169.1	m0.4	#42.8	95.5
Internal Link Dist (m)		207.5		246.5		136.3			185.5
Turn Bay Length (m)	30.0		12.0		66.0			88.0	
Base Capacity (vph)	360	536	379	471	137	939	929	185	1907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.13	0.44	0.12	0.30	0.82	0.19	0.66	0.70

Intersection Summary

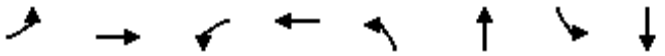
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	22	45	159	9	46	39	734	165	117	1180	90
Future Volume (vph)	57	22	45	159	9	46	39	734	165	117	1180	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.7	3.3	3.7	4.8	3.3	3.7	3.7	3.7	3.7
Total Lost time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1487	1579		1587	1373		1826	1597	1458	1615	3232	
Flt Permitted	0.72	1.00		0.71	1.00		0.12	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	1127	1579		1188	1373		232	1597	1458	316	3232	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	60	23	47	167	9	48	41	773	174	123	1242	95
RTOR Reduction (vph)	0	32	0	0	33	0	0	0	78	0	7	0
Lane Group Flow (vph)	60	38	0	167	24	0	41	773	96	123	1330	0
Heavy Vehicles (%)	20%	7%	7%	15%	16%	17%	12%	15%	12%	13%	12%	8%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.2	27.2		27.2	27.2		46.8	46.8	46.8	46.8	46.8	
Effective Green, g (s)	27.2	27.2		27.2	27.2		46.8	46.8	46.8	46.8	46.8	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	5.7	5.7		5.7	5.7		5.3	5.3	5.3	5.3	5.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	360	505		380	439		127	879	802	173	1779	
v/s Ratio Prot		0.02			0.02			c0.48			0.41	
v/s Ratio Perm	0.05			c0.14			0.18		0.07	0.39		
v/c Ratio	0.17	0.08		0.44	0.06		0.32	0.88	0.12	0.71	0.75	
Uniform Delay, d1	20.8	20.1		22.9	20.0		10.4	16.6	9.2	14.1	14.6	
Progression Factor	1.00	1.00		1.00	1.00		0.49	0.44	0.23	1.00	1.00	
Incremental Delay, d2	1.0	0.3		3.7	0.2		5.1	9.7	0.2	21.9	2.9	
Delay (s)	21.8	20.4		26.5	20.2		10.2	17.0	2.3	36.0	17.5	
Level of Service	C	C		C	C		B	B	A	D	B	
Approach Delay (s)		21.0			24.9			14.2			19.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



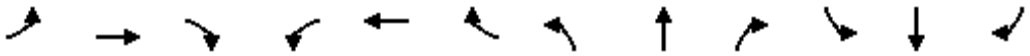
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	208	286	150	134	1083	200	1266
v/c Ratio	0.20	0.47	1.31	0.34	0.70	0.74	0.71	0.85
Control Delay	29.8	15.4	198.4	17.5	33.8	17.1	25.8	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	29.8	15.4	198.4	17.5	33.8	17.1	25.8	15.5
Queue Length 50th (m)	6.9	10.0	~63.2	10.1	8.3	82.8	12.5	39.3
Queue Length 95th (m)	16.8	30.2	#111.3	26.4	m15.4	m71.1	m27.0	50.8
Internal Link Dist (m)		33.0		208.3		163.7		136.3
Turn Bay Length (m)	20.0		45.0		23.0		23.0	
Base Capacity (vph)	261	445	219	441	192	1564	282	1590
Starvation Cap Reductn	0	0	0	0	0	0	0	17
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.47	1.31	0.34	0.70	0.69	0.71	0.80

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	57	141	272	60	83	127	830	199	190	1124	79
Future Volume (vph)	49	57	141	272	60	83	127	830	199	190	1124	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.3	3.7	3.3	3.7	3.7	3.0	3.3	3.7	3.3	3.5	3.5
Total Lost time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.91		1.00	0.97		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)	1534	1408		1544	1570		1337	2982		1616	3068	
Flt Permitted	0.66	1.00		0.55	1.00		0.11	1.00		0.17	1.00	
Satd. Flow (perm)	1067	1408		894	1570		162	2982		295	3068	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	60	148	286	63	87	134	874	209	200	1183	83
RTOR Reduction (vph)	0	100	0	0	56	0	0	26	0	0	6	0
Lane Group Flow (vph)	52	108	0	286	94	0	134	1057	0	200	1260	0
Heavy Vehicles (%)	19%	8%	20%	13%	10%	13%	26%	15%	8%	8%	15%	18%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.9	20.9		20.9	20.9		48.0	41.0		48.0	41.0	
Effective Green, g (s)	20.9	20.9		20.9	20.9		48.0	41.0		48.0	41.0	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.56	0.48		0.56	0.48	
Clearance Time (s)	5.8	5.8		5.8	5.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	262	346		219	386		188	1438		275	1479	
v/s Ratio Prot		0.08			0.06		0.06	0.35		c0.06	c0.41	
v/s Ratio Perm	0.05			c0.32			0.34			0.35		
v/c Ratio	0.20	0.31		1.31	0.24		0.71	0.73		0.73	0.85	
Uniform Delay, d1	25.4	26.2		32.0	25.7		12.9	17.6		11.3	19.3	
Progression Factor	1.00	1.00		1.00	1.00		1.78	0.89		1.90	0.55	
Incremental Delay, d2	1.7	2.3		166.7	1.5		14.4	2.3		12.0	4.9	
Delay (s)	27.1	28.5		198.7	27.2		37.4	18.0		33.5	15.6	
Level of Service	C	C		F	C		D	B		C	B	
Approach Delay (s)		28.2			139.7			20.1			18.0	
Approach LOS		C			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



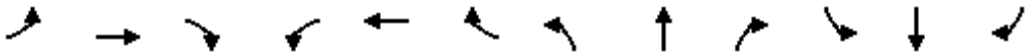
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	395	368	297	172	51	193	822	53	1535
v/c Ratio	1.03	0.87	1.32	0.41	0.11	0.97	0.70	0.18	1.37
Control Delay	82.6	45.2	196.2	31.2	0.5	74.9	35.5	16.9	201.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.6	45.2	196.2	31.2	0.5	74.9	35.5	16.9	201.1
Queue Length 50th (m)	~54.4	42.8	~45.2	23.8	0.0	29.5	71.7	6.3	~175.8
Queue Length 95th (m)	#121.7	#91.0	#93.6	41.7	0.0	m#40.6	m89.8	m7.5	m#200.2
Internal Link Dist (m)		233.7		108.9			156.4		163.7
Turn Bay Length (m)	105.0		50.0		50.0	21.0		21.0	
Base Capacity (vph)	383	424	225	416	462	198	1166	296	1121
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.87	1.32	0.41	0.11	0.97	0.70	0.18	1.37

Intersection Summary

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

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

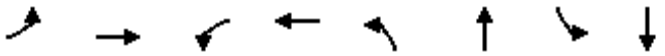
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	383	127	230	288	167	49	187	642	155	51	1042	447
Future Volume (vph)	383	127	230	288	167	49	187	642	155	51	1042	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.3	3.7	3.7	3.0	3.7	3.7	3.3	3.3	3.3
Total Lost time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1560	1487		1531	1779	1498	1465	3130		1694	2921	
Flt Permitted	0.61	1.00		0.24	1.00	1.00	0.13	1.00		0.22	1.00	
Satd. Flow (perm)	1002	1487		389	1779	1498	199	3130		399	2921	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	395	131	237	297	172	51	193	662	160	53	1074	461
RTOR Reduction (vph)	0	77	0	0	0	39	0	25	0	0	57	0
Lane Group Flow (vph)	395	291	0	297	172	12	193	797	0	53	1478	0
Heavy Vehicles (%)	17%	18%	16%	14%	8%	9%	15%	13%	14%	3%	15%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Effective Green, g (s)	26.9	19.9		26.9	19.9	19.9	38.0	31.0		38.0	31.0	
Actuated g/C Ratio	0.32	0.23		0.32	0.23	0.23	0.45	0.36		0.45	0.36	
Clearance Time (s)	4.0	5.7		4.0	5.7	5.7	4.0	6.4		4.0	6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	363	348		217	416	350	193	1141		285	1065	
v/s Ratio Prot	0.09	0.20		c0.11	0.10		c0.08	0.25		0.02	c0.51	
v/s Ratio Perm	0.25			c0.32		0.01	0.36			0.07		
v/c Ratio	1.09	0.84		1.37	0.41	0.03	1.00	0.70		0.19	1.39	
Uniform Delay, d1	28.2	31.0		27.0	27.6	25.1	20.2	23.0		14.1	27.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.62	1.48		1.57	1.53	
Incremental Delay, d2	73.0	20.8		192.4	3.0	0.2	53.5	2.5		0.7	177.6	
Delay (s)	101.1	51.8		219.5	30.6	25.3	86.1	36.5		23.0	218.9	
Level of Service	F	D		F	C	C	F	D		C	F	
Approach Delay (s)		77.3			138.0			45.9			212.4	
Approach LOS		E			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	132.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.1
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



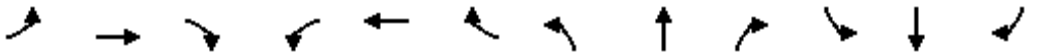
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	73	310	244	32	954	237	1417
v/c Ratio	0.08	0.12	0.80	0.40	0.16	0.82	1.03	1.23
Control Delay	16.9	12.5	47.7	7.9	12.1	31.1	50.1	127.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	12.5	47.7	7.9	12.1	31.1	50.1	127.9
Queue Length 50th (m)	3.0	4.5	41.9	3.0	2.4	70.8	~21.2	~156.3
Queue Length 95th (m)	8.2	13.0	#103.5	22.2	6.6	95.2	m10.8	m97.2
Internal Link Dist (m)		260.4		114.4		529.3		156.4
Turn Bay Length (m)	30.0		33.0		24.0		22.0	
Base Capacity (vph)	365	586	387	608	201	1159	229	1153
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.12	0.80	0.40	0.16	0.82	1.03	1.23

Intersection Summary

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

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	42	29	301	28	209	31	785	141	230	1336	39
Future Volume (vph)	29	42	29	301	28	209	31	785	141	230	1336	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.98		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)	1573	1558		1659	1473		1448	3133		1644	3157	
Flt Permitted	0.47	1.00		0.71	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	771	1558		1239	1473		213	3133		242	3157	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	43	30	310	29	215	32	809	145	237	1377	40
RTOR Reduction (vph)	0	18	0	0	148	0	0	18	0	0	3	0
Lane Group Flow (vph)	30	55	0	310	96	0	32	936	0	237	1414	0
Heavy Vehicles (%)	16%	19%	11%	10%	0%	15%	26%	14%	13%	11%	15%	20%
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.4	33.4		26.6	26.6		35.6	28.6		35.6	28.6	
Effective Green, g (s)	33.4	33.4		26.6	26.6		35.6	28.6		35.6	28.6	
Actuated g/C Ratio	0.39	0.39		0.31	0.31		0.42	0.34		0.42	0.34	
Clearance Time (s)	4.0	6.0		6.0	6.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	329	612		387	460		190	1054		216	1062	
v/s Ratio Prot	0.00	c0.04			0.07		0.01	0.30		c0.09	c0.45	
v/s Ratio Perm	0.03			c0.25			0.06			0.37		
v/c Ratio	0.09	0.09		0.80	0.21		0.17	0.89		1.10	1.33	
Uniform Delay, d1	16.3	16.2		26.8	21.5		18.3	26.7		20.0	28.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.18	0.84	
Incremental Delay, d2	0.0	0.3		15.9	1.0		1.9	11.1		51.0	149.9	
Delay (s)	16.3	16.5		42.7	22.5		20.2	37.8		74.6	173.5	
Level of Service	B	B		D	C		C	D		E	F	
Approach Delay (s)		16.5			33.8			37.2			159.3	
Approach LOS		B			C			D			F	

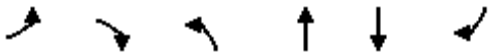
Intersection Summary			
HCM 2000 Control Delay	97.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	26	914	15	36	1473
Future Volume (Veh/h)	12	26	914	15	36	1473
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	13	27	952	16	38	1534
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2570	484			968	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2570	484			968	
tC, single (s)	7.0	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	25	95			95	
cM capacity (veh/h)	17	518			695	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	40	635	333	38	1534
Volume Left	13	0	0	38	0
Volume Right	27	0	16	0	0
cSH	50	1700	1700	695	1700
Volume to Capacity	0.81	0.37	0.20	0.05	0.90
Queue Length 95th (m)	25.2	0.0	0.0	1.3	0.0
Control Delay (s)	201.6	0.0	0.0	10.5	0.0
Lane LOS	F			B	
Approach Delay (s)	201.6	0.0		0.3	
Approach LOS	F				

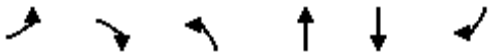
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	60	40	883	1402	76
Future Volume (Veh/h)	34	60	40	883	1402	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	36	63	42	929	1476	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2024	1476	1556			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2024	1476	1556			
tC, single (s)	7.2	7.2	4.7			
tC, 2 stage (s)						
tF (s)	3.7	3.5	2.5			
p0 queue free %	0	38	87			
cM capacity (veh/h)	35	101	316			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	99	352	619	1476	80
Volume Left	36	42	0	0	0
Volume Right	63	0	0	0	80
cSH	60	316	1700	1700	1700
Volume to Capacity	1.64	0.13	0.36	0.87	0.05
Queue Length 95th (m)	68.2	3.5	0.0	0.0	0.0
Control Delay (s)	463.8	4.8	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	463.8	1.7		0.0	
Approach LOS	F				

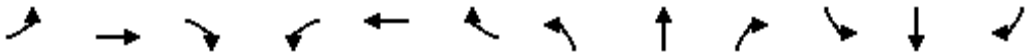
Intersection Summary			
Average Delay	18.1		
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	17	23	886	1393	53
Future Volume (Veh/h)	40	17	23	886	1393	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	18	25	953	1498	57
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	2053	778	1555			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2053	778	1555			
tC, single (s)	7.0	6.9	4.7			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.5			
p0 queue free %	0	95	92			
cM capacity (veh/h)	41	344	316			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	343	635	999	556
Volume Left	43	25	0	0	0
Volume Right	18	0	0	0	57
cSH	55	316	1700	1700	1700
Volume to Capacity	1.10	0.08	0.37	0.59	0.33
Queue Length 95th (m)	39.1	1.9	0.0	0.0	0.0
Control Delay (s)	273.1	2.8	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	273.1	1.0		0.0	
Approach LOS	F				

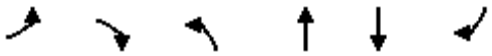
Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	0	91	0	0	0	79	816	0	0	1193	195
Future Volume (Veh/h)	97	0	91	0	0	0	79	816	0	0	1193	195
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Hourly flow rate (vph)	101	0	95	0	0	0	82	850	0	0	1243	203
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	2358	2358	1344	2352	2460	850	1446			850		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2358	2358	1344	2352	2460	850	1446			850		
tC, single (s)	7.2	6.5	6.4	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	0	100	44	100	100	100	82			100		
cM capacity (veh/h)	19	29	170	9	25	360	445			788		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	196	0	82	850	0	1446
Volume Left	101	0	82	0	0	0
Volume Right	95	0	0	0	0	203
cSH	34	1700	445	1700	1700	1700
Volume to Capacity	5.79	0.00	0.18	0.50	0.00	0.85
Queue Length 95th (m)	Err	0.0	5.1	0.0	0.0	0.0
Control Delay (s)	Err	0.0	14.9	0.0	0.0	0.0
Lane LOS	F	A	B			
Approach Delay (s)	Err	0.0	1.3		0.0	
Approach LOS	F	A				

Intersection Summary				
Average Delay	761.9			
Intersection Capacity Utilization	92.2%	ICU Level of Service		F
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	42	82	60	818	1224	59
Future Volume (Veh/h)	42	82	60	818	1224	59
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	43	84	61	835	1249	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				378		
pX, platoon unblocked						
vC, conflicting volume	1818	1279	1309			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1818	1279	1309			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.4			
p0 queue free %	27	43	87			
cM capacity (veh/h)	59	148	456			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	127	339	557	1309
Volume Left	43	61	0	0
Volume Right	84	0	0	60
cSH	98	456	1700	1700
Volume to Capacity	1.30	0.13	0.33	0.77
Queue Length 95th (m)	68.0	3.5	0.0	0.0
Control Delay (s)	268.8	4.4	0.0	0.0
Lane LOS	F	A		
Approach Delay (s)	268.8	1.7		0.0
Approach LOS	F			

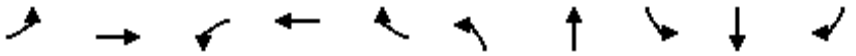
Intersection Summary			
Average Delay	15.3		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	128	748	14	125	1175
Future Volume (Veh/h)	8	128	748	14	125	1175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	8	131	763	14	128	1199
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)			254			
pX, platoon unblocked						
vC, conflicting volume	1626	388			777	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1626	388			777	
tC, single (s)	7.2	7.1			4.5	
tC, 2 stage (s)						
tF (s)	3.7	3.4			2.4	
p0 queue free %	87	78			82	
cM capacity (veh/h)	64	585			728	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	139	509	268	528	799
Volume Left	8	0	0	128	0
Volume Right	131	0	14	0	0
cSH	398	1700	1700	728	1700
Volume to Capacity	0.35	0.30	0.16	0.18	0.47
Queue Length 95th (m)	11.7	0.0	0.0	4.8	0.0
Control Delay (s)	18.8	0.0	0.0	4.6	0.0
Lane LOS	C			A	
Approach Delay (s)	18.8	0.0		1.8	
Approach LOS	C				

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

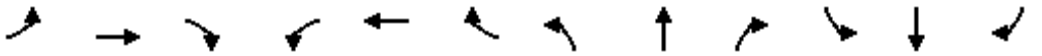


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	223	347	70	204	91	46	510	153	776	287
v/c Ratio	0.53	0.79	0.21	0.52	0.22	0.25	0.91	0.56	1.15	0.41
Control Delay	23.8	42.0	17.6	35.3	3.6	18.0	53.4	24.3	114.7	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	42.0	17.6	35.3	3.6	18.0	53.4	24.3	114.7	10.3
Queue Length 50th (m)	26.7	53.7	7.6	32.2	0.0	4.4	91.5	15.8	~193.2	11.4
Queue Length 95th (m)	42.9	#89.7	15.5	52.9	6.3	11.1	#164.9	30.0	#277.2	34.9
Internal Link Dist (m)		208.9		217.2			306.0		230.2	
Turn Bay Length (m)	50.0		46.0		46.0			81.0		
Base Capacity (vph)	417	502	413	604	581	187	561	275	674	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.69	0.17	0.34	0.16	0.25	0.91	0.56	1.15	0.41

Intersection Summary

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

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	173	164	68	198	88	45	458	37	148	753	278
Future Volume (vph)	216	173	164	68	198	88	45	458	37	148	753	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1644	1483		1601	1628	1361	1560	1598		1674	1685	1445
Flt Permitted	0.51	1.00		0.36	1.00	1.00	0.11	1.00		0.22	1.00	1.00
Satd. Flow (perm)	875	1483		613	1628	1361	188	1598		379	1685	1445
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	223	178	169	70	204	91	46	472	38	153	776	287
RTOR Reduction (vph)	0	33	0	0	0	69	0	3	0	0	0	122
Lane Group Flow (vph)	223	314	0	70	204	22	46	507	0	153	776	165
Heavy Vehicles (%)	11%	22%	18%	14%	18%	20%	17%	18%	30%	9%	14%	13%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	36.4	26.3		31.8	24.0	24.0	39.0	35.0		45.0	38.0	38.0
Effective Green, g (s)	36.4	26.3		31.8	24.0	24.0	39.0	35.0		45.0	38.0	38.0
Actuated g/C Ratio	0.37	0.27		0.33	0.25	0.25	0.40	0.36		0.46	0.39	0.39
Clearance Time (s)	4.0	6.5		4.0	6.5	6.5	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	406	400		278	400	335	131	573		267	656	563
v/s Ratio Prot	c0.06	c0.21		0.02	0.13		0.01	0.32		c0.04	c0.46	
v/s Ratio Perm	0.15			0.06		0.02	0.13			0.22		0.11
v/c Ratio	0.55	0.79		0.25	0.51	0.07	0.35	0.89		0.57	1.18	0.29
Uniform Delay, d1	22.3	33.0		23.5	31.7	28.2	23.2	29.4		18.3	29.8	20.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	9.8		0.5	1.1	0.1	1.6	18.0		3.0	97.3	1.3
Delay (s)	23.8	42.7		24.0	32.8	28.3	24.8	47.4		21.2	127.1	21.8
Level of Service	C	D		C	C	C	C	D		C	F	C
Approach Delay (s)		35.3			30.0			45.5			88.9	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM 2000 Control Delay	60.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	97.5	Sum of lost time (s)	21.4
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	22	91	447	76	357	621
Future Volume (Veh/h)	22	91	447	76	357	621
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	24	98	481	82	384	668
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						330
pX, platoon unblocked	0.70					
vC, conflicting volume	1958	282			563	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2150	282			563	
tC, single (s)	6.9	7.2			4.3	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	0	86			59	
cM capacity (veh/h)	16	678			945	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	24	98	321	242	384	668
Volume Left	24	0	0	0	384	0
Volume Right	0	98	0	82	0	0
cSH	16	678	1700	1700	945	1700
Volume to Capacity	1.48	0.14	0.19	0.14	0.41	0.39
Queue Length 95th (m)	26.8	3.8	0.0	0.0	15.2	0.0
Control Delay (s)	736.3	11.2	0.0	0.0	11.4	0.0
Lane LOS	F	B			B	
Approach Delay (s)	153.8		0.0		4.2	
Approach LOS	F					

Intersection Summary			
Average Delay	13.3		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix C COLLISION STATISTICS

Collision Date	Collision Time	Environment Condition (1)	Classification of Collision	Collision Location	Latitude	Longitude	Initial Impact Type	Sequence of Events 1	Driver Action	Driver Condition
07/27/2019 02:01 PM	07/27/2019 02:01 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
07/27/2019 02:01 PM	07/27/2019 02:01 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
07/21/2019 11:10 PM	07/21/2019 11:10 PM	02 rain	03 P.D. only	01 non intersection	42.23922790321322	-83.06127537220970	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
07/21/2019 11:10 PM	07/21/2019 11:10 PM	02 rain	03 P.D. only	01 non intersection	42.23922790321322	-83.06127537220970	03 rear end	01 other motor vehicle	01 driving properly	01 normal
07/16/2019 10:10 PM	07/16/2019 10:10 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
07/16/2019 10:10 PM	07/16/2019 10:10 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
06/27/2019 12:17 PM	06/27/2019 12:17 PM	01 clear	03 P.D. only	04 at/near private drive	42.24416571012341	-83.06095322566045	02 angle	01 other motor vehicle	08 failed to yield right-of-way	01 normal
06/27/2019 12:17 PM	06/27/2019 12:17 PM	01 clear	03 P.D. only	04 at/near private drive	42.24416571012341	-83.06095322566045	02 angle	01 other motor vehicle	01 driving properly	01 normal
03/01/2019 02:00 PM	03/01/2019 02:00 PM	01 clear	03 P.D. only	03 at intersection	42.24610141400937	-83.06087754232789	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
03/01/2019 02:00 PM	03/01/2019 02:00 PM	01 clear	03 P.D. only	03 at intersection	42.24610141400937	-83.06087754232789	03 rear end	01 other motor vehicle	01 driving properly	01 normal
04/04/2019 02:38 PM	04/04/2019 02:38 PM	01 clear	03 P.D. only	03 at intersection	42.23705210000000	-83.06142779999999	05 turning movement	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
04/04/2019 02:38 PM	04/04/2019 02:38 PM	01 clear	03 P.D. only	03 at intersection	42.23705210000000	-83.06142779999999	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
01/30/2019 04:15 PM	01/30/2019 04:15 PM	01 clear		01 non intersection	42.25017231318335	-83.06070168687677	03 rear end	01 other motor vehicle	01 driving properly	01 normal
01/30/2019 04:15 PM	01/30/2019 04:15 PM	01 clear		01 non intersection	42.25017231318335	-83.06070168687677	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
02/02/2019 07:50 PM	02/02/2019 07:50 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	02 angle	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
02/02/2019 07:50 PM	02/02/2019 07:50 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	02 angle	01 other motor vehicle	01 driving properly	01 normal
01/19/2019 11:53 AM	01/19/2019 11:53 AM	03 snow	03 P.D. only	01 non intersection	42.22185225284256	-83.06047678010407	07 single motor vehicle(other)	99 other fixed object	10 lost control	01 normal
01/12/2019 06:30 PM	01/12/2019 06:30 PM	01 clear	03 P.D. only	01 non intersection	42.25220031779071	-83.06053212289401	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
01/10/2019 04:45 PM	01/10/2019 04:45 PM	01 clear	03 P.D. only	01 non intersection	42.24448809183266	-83.06089652372259	03 rear end	01 other motor vehicle	01 driving properly	08 inattentive
01/10/2019 04:45 PM	01/10/2019 04:45 PM	01 clear	03 P.D. only	01 non intersection	42.24448809183266	-83.06089652372259	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/10/2018 04:52 PM	12/10/2018 04:52 PM	01 clear	03 P.D. only	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
12/10/2018 04:52 PM	12/10/2018 04:52 PM	01 clear	03 P.D. only	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
11/23/2018 11:35 PM	11/23/2018 11:35 PM	01 clear	03 P.D. only	04 at/near private drive	42.24445472582637	-83.06092728172984	04 sideswipe	01 other motor vehicle		
11/23/2018 11:35 PM	11/23/2018 11:35 PM	01 clear	03 P.D. only	04 at/near private drive	42.24480110000000	-83.06090280000001	04 sideswipe	01 other motor vehicle	01 driving properly	99 other
11/20/2018 04:31 PM	11/20/2018 04:31 PM	01 clear	03 P.D. only	03 at intersection	42.22667702168282	-83.06066573962692	05 turning movement	01 other motor vehicle	08 failed to yield right-of-way	01 normal
11/20/2018 04:31 PM	11/20/2018 04:31 PM	01 clear	03 P.D. only	03 at intersection	42.22602990000000	-83.06065769999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/15/2018 07:30 AM	11/15/2018 07:30 AM	01 clear	02 non-fatal injury	98 other (on highway)	42.23982640000000	-83.06125589999999	03 rear end	01 other motor vehicle	02 following too close	01 normal
11/15/2018 07:30 AM	11/15/2018 07:30 AM	01 clear	02 non-fatal injury	98 other (on highway)	42.23982640000000	-83.06125589999999	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/27/2018 04:00 PM	10/27/2018 04:00 PM	02 rain	03 P.D. only	03 at intersection	42.24809290000000	-83.06066560000000	03 rear end	01 other motor vehicle	02 following too close	01 normal
10/27/2018 04:00 PM	10/27/2018 04:00 PM	02 rain	03 P.D. only	03 at intersection	42.24809290000000	-83.06066560000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/15/2018 11:00 AM	10/15/2018 11:00 AM	02 rain	04 non-reportable	03 at intersection	42.24630670829914	-83.06090813259101	03 rear end	01 other motor vehicle	08 failed to yield right-of-way	01 normal
10/15/2018 11:00 AM	10/15/2018 11:00 AM	02 rain	04 non-reportable	03 at intersection	42.24630670829914	-83.06090813259101	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/30/2018 05:29 PM	09/30/2018 05:29 PM	01 clear	03 P.D. only	02 intersection related	42.24480590000000	-83.06102420000002	03 rear end	01 other motor vehicle	02 following too close	01 normal
09/30/2018 05:29 PM	09/30/2018 05:29 PM	01 clear	03 P.D. only	02 intersection related	42.24480590000000	-83.06102420000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/24/2018 06:40 PM	09/24/2018 06:40 PM	02 rain	02 non-fatal injury	03 at intersection	42.24476679282692	-83.06073290268557	02 angle	01 other motor vehicle	07 disobeyed traffic control	01 normal
09/24/2018 06:40 PM	09/24/2018 06:40 PM	02 rain	02 non-fatal injury	03 at intersection	42.24476679282692	-83.06073290268557	02 angle	01 other motor vehicle	07 disobeyed traffic control	01 normal
09/24/2018 06:40 PM	09/24/2018 06:40 PM	02 rain	02 non-fatal injury	03 at intersection	42.24476679282692	-83.06073290268557	02 angle	01 other motor vehicle	01 driving properly	01 normal
09/24/2018 06:40 PM	09/24/2018 06:40 PM	02 rain	02 non-fatal injury	03 at intersection	42.24476679282692	-83.06073290268557	02 angle	01 other motor vehicle	01 driving properly	01 normal
09/21/2018 02:10 PM	09/21/2018 02:10 PM	01 clear	03 P.D. only	01 non intersection	42.23499950000001	-83.06181219999996	03 rear end	01 other motor vehicle	99 other	08 inattentive
09/21/2018 02:10 PM	09/21/2018 02:10 PM	01 clear	03 P.D. only	01 non intersection	42.23499950000001	-83.06181219999996	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/01/2018 02:15 PM	09/01/2018 02:15 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
09/01/2018 02:15 PM	09/01/2018 02:15 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
06/21/2018 03:15 PM	06/21/2018 03:15 PM	01 clear	03 P.D. only	04 at/near private drive	42.25015132982136	-83.06065785942758	04 sideswipe	01 other motor vehicle	12 improper lane change	08 inattentive
06/21/2018 03:15 PM	06/21/2018 03:15 PM	01 clear	03 P.D. only	04 at/near private drive	42.25015132982136	-83.06065785942758	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
06/22/2018 10:21 AM	06/22/2018 10:21 AM	01 clear	02 non-fatal injury	03 at intersection	42.22589269476291	-83.06077094278601	07 single motor vehicle(other)	20 ran off road	10 lost control	01 normal
06/08/2018 08:30 AM	06/08/2018 08:30 AM	01 clear	03 P.D. only	04 at/near private drive	42.25162311163937	-83.06057524666244	05 turning movement	01 other motor vehicle	99 other	01 normal
06/08/2018 08:30 AM	06/08/2018 08:30 AM	01 clear	03 P.D. only	04 at/near private drive	42.25162311163937	-83.06057524666244	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
05/29/2018 09:21 PM	05/29/2018 09:21 PM	01 clear	03 P.D. only	01 non intersection	42.25219180000000	-83.06054970000002	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
04/19/2018 05:09 PM	04/19/2018 05:09 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	02 following too close	01 normal
04/19/2018 05:09 PM	04/19/2018 05:09 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
04/19/2018 05:09 PM	04/19/2018 05:09 PM	01 clear	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	03 rear end			
04/06/2018 06:50 PM	04/06/2018 06:50 PM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	03 ability impaired, alcohol (over .08)
04/06/2018 06:50 PM	04/06/2018 06:50 PM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	03 ability impaired, alcohol (over .08)
04/06/2018 06:50 PM	04/06/2018 06:50 PM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
03/10/2018 10:21 AM	03/10/2018 10:21 AM	01 clear	03 P.D. only	01 non intersection	42.24641910000000	-83.06089900000000	04 sideswipe	01 other motor vehicle	12 improper lane change	01 normal
03/10/2018 10:21 AM	03/10/2018 10:21 AM	01 clear	03 P.D. only	01 non intersection	42.24641910000000	-83.06089900000000	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
02/25/2018 02:27 PM	02/25/2018 02:27 PM	01 clear	02 non-fatal injury	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
02/25/2018 02:27 PM	02/25/2018 02:27 PM	01 clear	02 non-fatal injury	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
02/25/2018 02:27 PM	02/25/2018 02:27 PM	01 clear	02 non-fatal injury	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
03/01/2018 11:30 AM	03/01/2018 11:30 AM	01 clear	03 P.D. only	02 intersection related	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
03/01/2018 11:30 AM	03/01/2018 11:30 AM	01 clear	03 P.D. only	02 intersection related	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
02/05/2018 01:50 PM	02/05/2018 01:50 PM	01 clear	03 P.D. only	04 at/near private drive	42.25016900000000	-83.06125390000000	05 turning movement	01 other motor vehicle	99 other	08 inattentive
02/05/2018 01:50 PM	02/05/2018 01:50 PM	01 clear	03 P.D. only	04 at/near private drive	42.25016900000000	-83.06125390000000	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
01/27/2018 01:42 PM	01/27/2018 01:42 PM	02 rain	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
01/27/2018 01:42 PM	01/27/2018 01:42 PM	02 rain	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
12/29/2017 03:18 PM	12/29/2017 03:18 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
12/29/2017 03:18 PM	12/29/2017 03:18 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
12/24/2017 05:30 PM	12/24/2017 05:30 PM	03 snow	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	10 lost control	01 normal
12/24/2017 05:30 PM	12/24/2017 05:30 PM	03 snow	03 P.D. only	03 at intersection	42.24641910000000	-83.06089900000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/14/2017 06:50 PM	11/14/2017 06:50 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	02 angle	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
11/14/2017 06:50 PM	11/14/2017 06:50 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	02 angle	01 other motor vehicle	01 driving properly	01 normal
11/11/2017 05:25 PM	11/11/2017 05:25 PM	01 clear	03 P.D. only	03 at intersection	42.24480590000000	-83.06102420000002	05 turning movement	01 other motor vehicle	99 other	08 inattentive
11/11/2017 05:25 PM	11/11/2017 05:25 PM	01 clear	03 P.D. only	03 at intersection	42.24480590000000	-83.06102420000002	05 turning movement	01 other motor vehicle		
10/18/2017 01:00 PM	10/18/2017 01:00 PM	01 clear	02 non-fatal injury	04 at/near private drive	42.24985840000000	-83.06020519999998	07 single motor vehicle(other)	03 pedestrian	06 improper turn	01 normal
10/18/2017 01:00 PM	10/18/2017 01:00 PM	01 clear	02 non-fatal injury	04 at/near private drive	42.24985840000000	-83.06020519999998	07 single motor vehicle(other)	03 pedestrian	06 improper turn	01 normal
10/18/2017 01:00 PM	10/18/2017 01:00 PM	01 clear	02 non-fatal injury	04 at/near private drive	42.24985840000000	-83.06020519999998	07 single motor vehicle(other)	03 pedestrian	06 improper turn	01 normal
09/18/2017 02:42 PM	09/18/2017 02:42 PM	02 rain	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	02 following too close	01 normal
09/18/2017 02:42 PM	09/18/2017 02:42 PM	02 rain	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/07/2017 01:00 PM	09/07/2017 01:00 PM	01 clear	03 P.D. only	02 intersection related	42.24480590000000	-83.06102420000002	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
09/07/2017 01:00 PM	09/07/2017 01:00 PM	01 clear	03 P.D. only	02 intersection related	42.24480590000000	-83.06102420000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/05/2017 02:20 PM	09/05/2017 02:20 PM	01 clear	03 P.D. only	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	12 improper lane change	01 normal
09/05/2017 02:20 PM	09/05/2017 02:20 PM	01 clear	03 P.D. only	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
07/02/2017 11:00 AM	07/02/2017 11:00 AM	01 clear	03 P.D. only	01 non intersection	42.25183911947503	-83.06040787839151	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
07/02/2017 11:00 AM	07/02/2017 11:00 AM	01 clear	03 P.D. only	01 non intersection	42.25183911947503	-83.06040787839151	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
05/05/2017 03:19 PM	05/05/2017 03:19 PM	02 rain	03 P.D. only	01 non intersection	42.23804800000000	-83.06088820000002	03 rear end	01 other motor vehicle	02 following too close	01 normal
05/05/2017 03:19 PM	05/05/2017 03:19 PM	02 rain	03 P.D. only	01 non intersection	42.23804800000000	-83.06088820000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/30/2017 04:35 PM	05/30/2017 04:35 PM	01 clear	02 non-fatal injury	01 non intersection	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
05/30/2017 04:35 PM	05/30/2017 04:35 PM	01 clear	02 non-fatal injury	01 non intersection	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
05/30/2017 04:35 PM	05/30/2017 04:35 PM	01 clear	02 non-fatal injury	01 non intersection	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/27/2017 12:17 PM	05/27/2017 12:17 PM	01 clear	02 non-fatal injury	03 at intersection	42.24955040000000	-83.06065719999998	02 angle	01 other motor vehicle	07 disobeyed traffic control	08 inattentive
05/27/2017 12:17 PM	05/27/2017 12:17 PM	01 clear	02 non-fatal injury	03 at intersection	42.24955040000000	-83.06065719999998	02 angle	01 other motor vehicle	01 driving properly	01 normal
05/27/2017 10:55 AM	05/27/2017 10:55 AM	01 clear	03 P.D. only	02 intersection related	42.23802360000000	-83.06136889999999	02 angle	01 other motor vehicle	99 other	99 other
05/27/2017 10:55 AM	05/27/2017 10:55 AM	01 clear	03 P.D. only	02 intersection related	42.23802360000000	-83.06136889999999	02 angle	01 other motor vehicle	01 driving properly	01 normal
05/25/2017 04:55 PM	05/25/2017 04:55 PM	02 rain	02 non-fatal injury	03 at intersection	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	01 driving properly	08 inattentive
05/25/2017 04:55 PM	05/25/2017 04:55 PM	02 rain	02 non-fatal injury	03 at intersection	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/25/2017 04:55 PM	05/25/2017 04:55 PM	02 rain	02 non-fatal injury	03 at intersection	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/21/2017 09:57 AM	05/21/2017 09:57 AM	02 rain	03 P.D. only	02 intersection related	42.23904230000000	-83.06131240000002	03 rear end	01 other motor vehicle	02 following too close	01 normal
05/21/2017 09:57 AM	05/21/2017 09:57 AM	02 rain	03 P.D. only	02 intersection related	42.23904230000000	-83.06131240000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
04/26/2017 05:22 PM	04/26/2017 05:22 PM	01 clear	02 non-fatal injury	03 at intersection	42.24809290000000	-83.06066560000000	05 turning movement	04 cyclist	99 other	01 normal
04/26/2017 05:22 PM	04/26/2017 05:22 PM	01 clear	02 non-fatal injury	03 at intersection	42.24809290000000	-83.06066560000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
12/31/2016 01:50 PM	12/31/2016 01:50 PM	01 clear	03 P.D. only	01 non intersection	42.23013110000000	-83.06082359999999	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
12/24/2016 10:30 PM	12/24/2016 10:30 PM	01 clear	03 P.D. only	02 intersection related	42.23353130000000	-83.06168370000000	07 single motor vehicle(other)	53 pole (utility/tower)	99 other	08 inattentive
12/24/2016 10:30 PM	12/24/2016 10:30 PM	01 clear	03 P.D. only	02 intersection related	42.23353130000000	-83.06168370000000	07 single motor vehicle(other)	53 pole (utility/tower)	99 other	08 inattentive
01/12/2017 02:25 PM	01/12/2017 02:25 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
01/12/2017 02:25 PM	01/12/2017 02:25 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/19/2016 04:50 PM	12/19/2016 04:50 PM	01 clear	02 non-fatal injury	04 at/near private drive	42.24480110000000	-83.06090280000001	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
12/19/2016 04:50 PM	12/19/2016 04:50 PM	01 clear	02 non-fatal injury	04 at/near private drive	42.24480110000000	-83.06090280000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
12/02/2016 11:15 AM	12/02/2016 11:15 AM	01 clear	03 P.D. only	01 non intersection	42.23233740000001	-83.06152120000001	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
12/07/2016 06:20 PM	12/07/2016 06:20 PM	01 clear	02 non-fatal injury	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	10 lost control	01 normal
12/07/2016 06:20 PM	12/07/2016 06:20 PM	01 clear	02 non-fatal injury	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/07/2016 06:20 PM	12/07/2016 06:20 PM	01 clear	02 non-fatal injury	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/07/2016 06:20 PM	12/07/2016 06:20 PM	01 clear	02 non-fatal injury	02 intersection related	42.24641910000000	-83.06089900000000	03 rear end	01 other motor vehicle	01 driving properly	01 normal
11/16/2016 02:47 PM	11/16/2016 02:47 PM	01 clear	03 P.D. only	04 at/near private drive	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
11/16/2016 02:47 PM	11/16/2016 02:47 PM	01 clear	03 P.D. only	04 at/near private drive	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/23/2016 04:50 PM	11/23/2016 04:50 PM	02 rain	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	04 sideswipe	01 other motor vehicle	12 improper lane change	08 inattentive
11/23/2016 04:50 PM	11/23/2016 04:50 PM	02 rain	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
10/20/2016 07:15 AM	10/20/2016 07:15 AM	02 rain	03 P.D. only	03 at intersection	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
10/20/2016 07:15 AM	10/20/2016 07:15 AM	02 rain	03 P.D. only	03 at intersection	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
10/13/2016 03:59 PM	10/13/2016 03:59 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	02 following too close	08 inattentive

10/13/2016 03:59 PM	10/13/2016 03:59 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/20/2016 10:30 PM	09/20/2016 10:30 PM	01 clear		03 at intersection	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	02 following too close	08 inattentive
09/15/2016 04:00 PM	09/15/2016 04:00 PM	01 clear	03 P.D. only	04 at/near private drive	42.24673380000000	-83.06080920000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
09/15/2016 04:00 PM	09/15/2016 04:00 PM	01 clear	03 P.D. only	04 at/near private drive	42.24673380000000	-83.06080920000000	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
08/23/2016 05:34 PM	08/23/2016 05:34 PM	01 clear	02 non-fatal injury	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	04 cyclist		
08/23/2016 05:34 PM	08/23/2016 05:34 PM	01 clear	02 non-fatal injury	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
08/23/2016 05:34 PM	08/23/2016 05:34 PM	01 clear	02 non-fatal injury	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	04 cyclist	01 driving properly	01 normal
08/14/2016 01:25 PM	08/14/2016 01:25 PM	01 clear	03 P.D. only	03 at intersection	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
08/14/2016 01:25 PM	08/14/2016 01:25 PM	01 clear	03 P.D. only	03 at intersection	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
08/13/2016 02:22 PM	08/13/2016 02:22 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
08/13/2016 02:22 PM	08/13/2016 02:22 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
08/13/2016 02:22 PM	08/13/2016 02:22 PM	01 clear	03 P.D. only	03 at intersection	42.24955040000000	-83.06065719999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
07/23/2016 10:45 AM	07/23/2016 10:45 AM	01 clear	03 P.D. only	03 at intersection	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
07/23/2016 10:45 AM	07/23/2016 10:45 AM	01 clear	03 P.D. only	03 at intersection	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
07/23/2016 10:45 AM	07/23/2016 10:45 AM	01 clear	03 P.D. only	03 at intersection	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
07/19/2016 05:45 PM	07/19/2016 05:45 PM	01 clear	03 P.D. only	02 intersection related	42.23628430000000	-83.06147770000001	05 turning movement	01 other motor vehicle	08 failed to yield right-of-way	08 inattentive
07/19/2016 05:45 PM	07/19/2016 05:45 PM	01 clear	03 P.D. only	02 intersection related	42.23628430000000	-83.06147770000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
07/18/2016 04:50 PM	07/18/2016 04:50 PM	01 clear	03 P.D. only	03 at intersection	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
07/18/2016 04:50 PM	07/18/2016 04:50 PM	01 clear	03 P.D. only	03 at intersection	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
07/01/2016 05:05 PM	07/01/2016 05:05 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	04 sideswipe	01 other motor vehicle	12 improper lane change	08 inattentive
07/01/2016 05:05 PM	07/01/2016 05:05 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
06/03/2016 06:10 PM	06/03/2016 06:10 PM	01 clear	03 P.D. only	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
06/03/2016 06:10 PM	06/03/2016 06:10 PM	01 clear	03 P.D. only	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
05/25/2016 06:21 PM	05/25/2016 06:21 PM	01 clear	02 non-fatal injury	01 non intersection	42.23431770000000	-83.06196920000002	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
05/25/2016 06:21 PM	05/25/2016 06:21 PM	01 clear	02 non-fatal injury	01 non intersection	42.23431770000000	-83.06196920000002	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
05/25/2016 06:21 PM	05/25/2016 06:21 PM	01 clear	02 non-fatal injury	01 non intersection	42.23431770000000	-83.06196920000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/10/2016 02:27 PM	05/10/2016 02:27 PM	02 rain	03 P.D. only	01 non intersection	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	99 other	01 normal
05/10/2016 02:27 PM	05/10/2016 02:27 PM	02 rain	03 P.D. only	01 non intersection	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	01 driving properly	01 normal
05/10/2016 02:27 PM	05/10/2016 02:27 PM	02 rain	03 P.D. only	01 non intersection	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	01 driving properly	01 normal
03/19/2016 05:07 PM	03/19/2016 05:07 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
03/19/2016 05:07 PM	03/19/2016 05:07 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
02/09/2016 06:45 PM	02/09/2016 06:45 PM	03 snow	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	10 lost control	01 normal
02/09/2016 06:45 PM	02/09/2016 06:45 PM	03 snow	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
01/30/2016 12:06 AM	01/30/2016 12:06 AM	01 clear	03 P.D. only	01 non intersection	42.22828370000000	-83.06088649999998	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
01/21/2016 05:15 PM	01/21/2016 05:15 PM	01 clear	03 P.D. only	04 at/near private drive	42.24555480000000	-83.06151610000000	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
01/21/2016 05:15 PM	01/21/2016 05:15 PM	01 clear	03 P.D. only	04 at/near private drive	42.24555480000000	-83.06151610000000	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
01/08/2016 11:03 AM	01/08/2016 11:03 AM	01 clear	03 P.D. only	03 at intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
01/08/2016 11:03 AM	01/08/2016 11:03 AM	01 clear	03 P.D. only	03 at intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	07 disobeyed traffic control	01 normal
12/23/2015 04:35 PM	12/23/2015 04:35 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	02 following too close	01 normal
12/23/2015 04:35 PM	12/23/2015 04:35 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/23/2015 04:35 PM	12/23/2015 04:35 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/23/2015 04:35 PM	12/23/2015 04:35 PM	01 clear	03 P.D. only	02 intersection related	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
12/17/2015 02:35 PM	12/17/2015 02:35 PM	01 clear	03 P.D. only	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
12/17/2015 02:35 PM	12/17/2015 02:35 PM	01 clear	03 P.D. only	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
11/25/2015 03:17 PM	11/25/2015 03:17 PM	01 clear	03 P.D. only	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	08 failed to yield right-of-way	01 normal
11/25/2015 03:17 PM	11/25/2015 03:17 PM	01 clear	03 P.D. only	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/17/2015 05:10 PM	11/17/2015 05:10 PM	01 clear	03 P.D. only	03 at intersection	42.23233740000001	-83.06152120000001	03 rear end	01 other motor vehicle	02 following too close	01 normal
11/17/2015 05:10 PM	11/17/2015 05:10 PM	01 clear	03 P.D. only	03 at intersection	42.23233740000001	-83.06152120000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
11/13/2015 04:07 PM	11/13/2015 04:07 PM	99 other	03 P.D. only	04 at/near private drive	42.24336490000000	-83.06103759999996	05 turning movement	01 other motor vehicle	99 other	01 normal
11/13/2015 04:07 PM	11/13/2015 04:07 PM	99 other	03 P.D. only	04 at/near private drive	42.24336490000000	-83.06103759999996	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/02/2015 06:15 PM	11/02/2015 06:15 PM	01 clear	03 P.D. only	02 intersection related	42.23715000000000	-83.06141589999998	03 rear end	01 other motor vehicle	10 lost control	01 normal
11/02/2015 06:15 PM	11/02/2015 06:15 PM	01 clear	03 P.D. only	02 intersection related	42.23715000000000	-83.06141589999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
11/02/2015 06:15 PM	11/02/2015 06:15 PM	01 clear	03 P.D. only	02 intersection related	42.23715000000000	-83.06141589999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/26/2015 09:40 PM	10/26/2015 09:40 PM	01 clear	02 non-fatal injury	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	10 lost control	01 normal
10/26/2015 09:40 PM	10/26/2015 09:40 PM	01 clear	02 non-fatal injury	03 at intersection	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/04/2015 10:15 AM	10/04/2015 10:15 AM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	02 following too close	01 normal
10/04/2015 10:15 AM	10/04/2015 10:15 AM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	02 following too close	01 normal
10/04/2015 10:15 AM	10/04/2015 10:15 AM	01 clear	02 non-fatal injury	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/27/2015 02:40 PM	09/27/2015 02:40 PM	01 clear	04 non-reportable	02 intersection related	42.24641800000001	-83.06083819999998	04 sideswipe	01 other motor vehicle	12 improper lane change	08 inattentive
09/27/2015 02:40 PM	09/27/2015 02:40 PM	01 clear	04 non-reportable	02 intersection related	42.24641800000001	-83.06083819999998	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
10/02/2015 04:13 PM	10/02/2015 04:13 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	99 other	02 had been drinking
10/02/2015 04:13 PM	10/02/2015 04:13 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/02/2015 04:13 PM	10/02/2015 04:13 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle		
09/29/2015 03:15 PM	09/29/2015 03:15 PM	02 rain	02 non-fatal injury	03 at intersection	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/29/2015 03:15 PM	09/29/2015 03:15 PM	02 rain	02 non-fatal injury	03 at intersection	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/29/2015 03:15 PM	09/29/2015 03:15 PM	02 rain	02 non-fatal injury	03 at intersection	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/16/2015 12:45 PM	09/16/2015 12:45 PM	01 clear	04 non-reportable	03 at intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/16/2015 12:45 PM	09/16/2015 12:45 PM	01 clear	04 non-reportable	03 at intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
09/10/2015 09:13 AM	09/10/2015 09:13 AM	01 clear	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
09/10/2015 09:13 AM	09/10/2015 09:13 AM	01 clear	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
08/19/2015 03:58 PM	08/19/2015 03:58 PM	01 clear	03 P.D. only	03 at intersection	42.24641800000001	-83.06083819999998	07 single motor vehicle(other)	04 cyclist	99 other	08 inattentive
07/21/2015 05:51 PM	07/21/2015 05:51 PM	01 clear	02 non-fatal injury	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
07/21/2015 05:51 PM	07/21/2015 05:51 PM	01 clear	02 non-fatal injury	03 at intersection	42.24641800000001	-83.06083819999998	05 turning movement	01 other motor vehicle	08 failed to yield right-of-way	01 normal
07/12/2015 01:45 PM	07/12/2015 01:45 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement		06 improper turn	01 normal
07/12/2015 01:45 PM	07/12/2015 01:45 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
06/16/2015 02:50 PM	06/16/2015 02:50 PM	01 clear	02 non-fatal injury	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	04 cyclist	99 other	01 normal
06/16/2015 02:50 PM	06/16/2015 02:50 PM	01 clear	02 non-fatal injury	03 at intersection	42.22600150000000	-83.06065239999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
06/14/2015 04:36 PM	06/14/2015 04:36 PM	02 rain	02 non-fatal injury	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	02 following too close	01 normal
06/14/2015 04:36 PM	06/14/2015 04:36 PM	02 rain	02 non-fatal injury	03 at intersection	42.23446280000000	-83.06160119999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
05/15/2015 04:25 PM	05/15/2015 04:25 PM	01 clear	03 P.D. only	02 intersection related	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	08 failed to yield right-of-way	01 normal
05/15/2015 04:25 PM	05/15/2015 04:25 PM	01 clear	03 P.D. only	02 intersection related	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
06/01/2015 02:35 PM	06/01/2015 02:35 PM	01 clear	02 non-fatal injury	02 intersection related	42.23904230000000	-83.06131240000002	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
06/01/2015 02:35 PM	06/01/2015 02:35 PM	01 clear	02 non-fatal injury	02 intersection related	42.23904230000000	-83.06131240000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
06/01/2015 02:35 PM	06/01/2015 02:35 PM	01 clear	02 non-fatal injury	02 intersection related	42.23904230000000	-83.06131240000002	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/29/2015 06:33 PM	05/29/2015 06:33 PM	01 clear	03 P.D. only	01 non intersection	42.24810180000000	-83.06079090000003	04 sideswipe	01 other motor vehicle	12 improper lane change	01 normal
05/29/2015 06:33 PM	05/29/2015 06:33 PM	01 clear	03 P.D. only	01 non intersection	42.24810180000000	-83.06079090000003	04 sideswipe	01 other motor vehicle	01 driving properly	01 normal
05/12/2015 02:55 PM	05/12/2015 02:55 PM	01 clear	02 non-fatal injury	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	99 other	08 inattentive
05/12/2015 02:55 PM	05/12/2015 02:55 PM	01 clear	02 non-fatal injury	02 intersection related	42.24480350000000	-83.06096350000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/17/2015 03:20 PM	05/17/2015 03:20 PM	01 clear	03 P.D. only	03 at intersection	42.23628430000000	-83.06147770000001	03 rear end	01 other motor vehicle	02 following too close	01 normal
05/17/2015 03:20 PM	05/17/2015 03:20 PM	01 clear	03 P.D. only	03 at intersection	42.23628430000000	-83.06147770000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/13/2015 04:10 PM	05/13/2015 04:10 PM	01 clear	03 P.D. only	01 non intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	02 following too close	01 normal
05/13/2015 04:10 PM	05/13/2015 04:10 PM	01 clear	03 P.D. only	01 non intersection	42.24641800000001	-83.06083819999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/08/2015 11:36 PM	05/08/2015 11:36 PM	01 clear	03 P.D. only	02 intersection related	42.23628430000000	-83.06147770000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
05/08/2015 11:36 PM	05/08/2015 11:36 PM	01 clear	03 P.D. only	02 intersection related	42.23628430000000	-83.06147770000001	03 rear end	01 other motor vehicle	01 driving properly	01 normal
04/24/2015 06:25 PM	04/24/2015 06:25 PM	01 clear	03 P.D. only	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	99 other	08 inattentive
04/24/2015 06:25 PM	04/24/2015 06:25 PM	01 clear	03 P.D. only	02 intersection related	42.22828370000000	-83.06088649999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
03/14/2015 01:55 AM	03/14/2015 01:55 AM	07 fog, mist, smoke, dust	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	07 single motor vehicle(other)	60 ditch	07 disobeyed traffic control	02 had been drinking
11/14/2014 07:25 PM	11/14/2014 07:25 PM	01 clear	03 P.D. only	01 non intersection	42.22600150000000	-83.06065239999998	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
10/29/2014 06:06 PM	10/29/2014 06:06 PM	01 clear	03 P.D. only	04 at/near private drive	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	06 improper turn	01 normal
10/29/2014 06:06 PM	10/29/2014 06:06 PM	01 clear	03 P.D. only	04 at/near private drive	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/08/2014 02:28 PM	11/08/2014 02:28 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	99 other	01 normal
11/08/2014 02:28 PM	11/08/2014 02:28 PM	01 clear	03 P.D. only	02 intersection related	42.24480350000000	-83.06096350000001	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
11/04/2014 06:35 PM	11/04/2014 06:35 PM	01 clear	03 P.D. only	03 at intersection	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	02 following too close	08 inattentive
11/04/2014 06:35 PM	11/04/2014 06:35 PM	01 clear	03 P.D. only	03 at intersection	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	01 driving properly	01 normal
11/04/2014 08:00 AM	11/04/2014 08:00 AM	01 clear	03 P.D. only	01 non intersection	42.24137760000000	-83.06087689999998	07 single motor vehicle(other)	09 animal (wild)	01 driving properly	01 normal
10/30/2014 02:45 PM	10/30/2014 02:45 PM	01 clear	02 non-fatal injury	02 intersection related	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	99 other	01 normal
10/30/2014 02:45 PM	10/30/2014 02:45 PM	01 clear	02 non-fatal injury	02 intersection related	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	99 other	01 normal
10/30/2014 02:45 PM	10/30/2014 02:45 PM	01 clear	02 non-fatal injury	02 intersection related	42.24480350000000	-83.06096350000001	02 angle	01 other motor vehicle	01 driving properly	01 normal
10/22/2014 04:55 PM	10/22/2014 04:55 PM	01 clear	03 P.D. only	02 intersection related	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	02 following too close	01 normal
10/22/2014 04:55 PM	10/22/2014 04:55 PM	01 clear	03 P.D. only	02 intersection related	42.23802360000000	-83.06136889999999	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/01/2014 11:05 AM	10/01/2014 11:05 AM	01 clear	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	05 turning movement	01 other motor vehicle	06 improper turn	08 inattentive
10/01/2014 11:05 AM	10/01/2014 11:05 AM	01 clear	03 P.D. only	03 at intersection	42.22828370000000	-83.06088649999998	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
10/24/2014 06:51 PM	10/24/2014 06:51 PM	01 clear	02 non-fatal injury	02 intersection related	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/24/2014 06:51 PM	10/24/2014 06:51 PM	01 clear	02 non-fatal injury	02 intersection related	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/24/2014 06:51 PM	10/24/2014 06:51 PM	01 clear	02 non-fatal injury	02 intersection related	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal
10/24/2014 06:51 PM	10/24/2014 06:51 PM	01 clear	02 non-fatal injury	02 intersection related	42.23446280000000	-83.06160119999998	03 rear end	01 other motor vehicle	10 lost control	01 normal
10/16/2014 12:00 AM	10/16/2014 12:00 AM	01 clear	03 P.D. only	04 at/near private drive	42.24810180000000	-83.06079090000003	05 turning movement	97 other moveable object	06 improper turn	01 normal
10/16/2014 12:00 AM	10/16/2014 12:00 AM	01 clear	03 P.D. only	04 at/near private drive	42.24810180000000	-83.06079090000003	05 turning movement	01 other motor vehicle	01 driving properly	01 normal
10/10/2014 01:09 PM	10/10/2014 01:09 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	03 rear end	01 other motor vehicle	99 other	01 normal
10/10/2014 01:09 PM	10/10/2014 01:09 PM	01 clear	03 P.D. only	03 at intersection	42.22600150000000	-83.06065239999998	03 rear end	01 other motor vehicle	01 driving properly	01 normal

Appendix D SIGNAL TIMING PLANS

INTERSECTION: Malden & Orford(Wyoming)

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **8**

N/S Street Name: **Malden**
E/W Street Name: **Orford(Wyoming)**

Last Database Change: **3/28/2018 15:35**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**40**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	8	0	7	0	8	0	7	0
1	Ped FDW	0	11	0	15	0	11	0	15	1
2	Min Green	0	24	0	10	0	24	0	10	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	Veh Extension	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	5
6	Max Gap	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	6
7	Min Gap	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	7
8	Max Limit	0	24	0	24	0	24	0	24	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	Sequence To	0	0	0	0	0	0	0	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	3.3	0.0	3.0	0.0	3.3	0.0	3.0	E
F	Red Clear	0.0	2.0	0.0	2.7	0.0	2.0	0.0	2.7	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	30	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	30	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	10
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	_2_4_6_8	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_2___6__	4
View Set Peds	- - - - -	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_2___6__	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_2___6__	E
First Phases	___4___8	F

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ----->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Reserved
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Reserved
4 = Reserved
5 = Reserved
6 = Reserved
7 = Reserved
8 = Reserved

Configuration <C+0+E=125>

Row	Column Numbers ---->	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases		4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	2 6	A
B	EV-B Phases		B
C	EV-C Phases		C
D	EV-D Phases		D
E	Extra 1 Config. Bits	1 3 5	E
F	IC Select (Interconnect)	2	F

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Restricted Phases	
Extra 2 Config. Bits	

Specials <C+0+F=2>

	F
Adv Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	2 4 6 8
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Vehicle Calls	2 4 6 8
Start-up Ped Calls	2 4 6 8

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Coordination Transition Minimums <C+0+C=5>

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name ----->									
0	Cycle Length	80	85	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	0	0	0	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	30	30	0	0	0	0	0	0	0
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	30	30	0	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	35	16	0	0	0	0	0	0	0
B	Offset 2	19	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	3	3	0	0	0	0	0	0	0
E	Hold Release	255	255	0	0	0	0	0	0	0
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

(Coord Extra Bit 1 = Programmed WALK Time for Sync Phases)

Row		E
0		
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	2 6
9	Plan 9 - Sync	2 6
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0
2	Perm 2 - End	0	0	0	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	4 8	4 8	12345678	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	4 8	4 8	12345678	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Row		F
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	2 4 6 8
5	Plan 5 - Lag	2 4 6 8
6	Plan 6 - Lag	2 4 6 8
7	Plan 7 - Lag	2 4 6 8
8	Plan 8 - Lag	2 4 6 8
9	Plan 9 - Lag	2 4 6 8
A	External Lag	
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Reserved		0
1	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	OR-4 (b)	0	System Det 3	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Reserved		System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Reserved		Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Sp Evnt Out 3	0	Reserved		Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Sp Evnt Out 4	0	Reserved		Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Sp Evnt Out 6	0	Reserved		Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Sp Evnt Out 7	0	Reserved		Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0			8
9	Reserved		NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0			9
A	Detector Fail	0	OR-4	0	Reserved		EV-C	0	DELAY-A	0			A
B	Monitor Reset	0	OR-5	0	Reserved		EV-D	0	DELAY-B	0			B
C	Reserved		OR-6	0	Reserved		RR-1	0	DELAY-C	0			C
D	Central Control	0	AND-4	0	Reserved		RR-2	0	DELAY-D	0			D
E	Excl. Ped DW	0	NAND-1	0	Reserved		Spec. Event 1	0	DELAY-E	0			E
F	Excl. Ped WK	0	NAND-2	0	Reserved		Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time Before Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time Before Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.5)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Row		A: RR1-2, Sp Ev 1	B: Sp Ev 2	C: Emer Veh
A	Ped F.D.W.	0	0	0
B	Initial	0	0	0
C				

Preempt Minimums <C+0+F=1>

Column Numbers ----->		0	1	2	3	1	3
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7	2	123 8	0.0	0.0
1		40	45_7	6	123 8	0.0	0.0
2		41	45_7	4	123 8	8.0	0.0
3		42	45_7	8	123 8	8.0	0.0
4		43	45_7	2	123 8	0.0	0.0
5		44	45_7	6	123 8	0.0	0.0
6		45	45_7	4	123 8	0.0	0.0
7		46	45_7	8	123 8	0.0	0.0
8		47	67	2	123 8	0.0	0.0
9		48	67	6	123 8	0.0	0.0
A		49	67	4	123 8	0.0	0.0
B		50	67	8	123 8	0.0	0.0
C		55	45_7	5	123 8	0.0	0.0
D		56	45_7	1	123 8	0.0	0.0
E		57	45_7	7	123 8	0.0	0.0
F		58	45_7	3	123 8	0.0	0.0

		4	5	6	7	2	4
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123 8	0.0	0.0
1		60	45_7	1	123 8	0.0	0.0
2		61	45_7	7	123 8	0.0	0.0
3		62	45_7	3	123 8	0.0	0.0
4		63	45_7	2	123 8	0.0	0.0
5		64	45_7	6	123 8	0.0	0.0
6		65	45_7	4	123 8	0.0	0.0
7		66	45_7	8	123 8	0.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	8	123 8	0.0	0.0
C		76	45_7	2	123 8	0.0	0.0
D		77	45_7	6	123 8	0.0	0.0
E		78	45_7	4	123 8	0.0	0.0
F		79	45_7	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ----->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

Dial-Back Telephone Number <C+0+C=5>

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	06 : 30	1	A	_23456_
2	10 : 00	1	B	_23456_
3	15 : 00	2	A	_23456_
4	18 : 30	1	B	_23456_
5	21 : 00	E	A	_23456_
6	08 : 00	1	B	1_____7
7	21 : 00	E	A	1_____7
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 = Permit Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Name	Type	EWStreet	NSStreet	Group	Drop#	Area	AreaAddr	Channel	Sys Ref #	Last Change	FM Name
Malden & Or	233RV2.X	Orford(Wyon	Malden	NONE	1	1	40	COM1:	8	#########	NONE

		Coord Minimums														Bar	
																Hour	Minute
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1

Page 0 <C/5>

Notes are in Column A, Rows 32 to 40

INTERSECTION: Malden & Delmar

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **1**

N/S Street Name: **Malden**
E/W Street Name: **Delmar**

Last Database Change: **4/6/2018 11:19**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**3**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**41**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	15	0	7	0	15	0	7	0
1	Ped FDW	0	9	0	11	0	9	0	11	1
2	Min Green	7	26	0	10	7	26	0	10	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	Veh Extension	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	5
6	Max Gap	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	6
7	Min Gap	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	7
8	Max Limit	7	26	0	18	7	26	0	18	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	Sequence To	0	0	0	0	8	0	0	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	3.0	3.3	0.0	3.3	3.0	3.3	0.0	3.3	E
F	Red Clear	1.0	3.0	0.0	2.5	1.0	3.0	0.0	2.5	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	30	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	30	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	10
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	12_456_8	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_2___6__	4
View Set Peds	- - - - -	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_2___6__	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_2___6__	E
First Phases	___4___8	F

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ----->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Reserved
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Reserved
4 = Reserved
5 = Reserved
6 = Reserved
7 = Reserved
8 = Reserved

Row	Column Numbers ---->	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases	1___5___	4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	_2___6__	A
B	EV-B Phases		B
C	EV-C Phases		C
D	EV-D Phases		D
E	Extra 1 Config. Bits	1_3_5___	E
F	IC Select (Interconnect)	_2_____	F

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Ped for 2P Output	_2_____
Ped for 6P Output	_____6__
Ped for 4P Output	___4____
Ped for 8P Output	_____8
Yellow Flash Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Adv Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	_2_4_6_8
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Vehicle Calls	12_456_8
Start-up Ped Calls	_2_4_6_8

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name ----->									
0	Cycle Length	80	80	85	0	0	0	0	0	0
1	Phase 1 - ForceOff	40	44	44	0	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	27	31	31	0	0	0	0	0	0
5	Phase 5 - ForceOff	40	44	44	0	0	0	0	0	0
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0
8	Phase 8 - ForceOff	27	31	31	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	29	17	16	0	0	0	0	0	0
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	3	0	0	3
D	Perm 1 - End	3	3	3	0	0	0	0	0	0
E	Hold Release	255	255	255	0	0	0	0	0	0
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

(Coord Extra Bit 1 = Programmed WALK Time for Sync Phases)

Row		E
0		
1	Plan 1 - Sync	_2___6__
2	Plan 2 - Sync	_2___6__
3	Plan 3 - Sync	_2___6__
4	Plan 4 - Sync	_2___6__
5	Plan 5 - Sync	_2___6__
6	Plan 6 - Sync	_2___6__
7	Plan 7 - Sync	_2___6__
8	Plan 8 - Sync	_2___6__
9	Plan 9 - Sync	_2___6__
A	NEMA Sync	_____
B	NEMA Hold	_____
C		
D		
E	Coord Extra	_____
F		

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	27	31	31	0	0	0	0	0	0
2	Perm 2 - End	30	34	34	0	0	0	0	0	0
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0
4	Perm 3 - End	0	0	0	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____
7										
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____
A	Perm 1 Veh Phase	___4___8	___4___8	___4___8	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	___4___8	___4___8	___4___8	12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase	1___5___	1___5___	1___5___	_____	_____	_____	_____	_____	_____
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____

Coordination - Bank 2 <C+0+C=2>

Row		F
0	Free Lag	_2_4_6_8
1	Plan 1 - Lag	_2_4_6_8
2	Plan 2 - Lag	_2_4_6_8
3	Plan 3 - Lag	_2_4_6_8
4	Plan 4 - Lag	_2_4_6_8
5	Plan 5 - Lag	_2_4_6_8
6	Plan 6 - Lag	_2_4_6_8
7	Plan 7 - Lag	_2_4_6_8
8	Plan 8 - Lag	_2_4_6_8
9	Plan 9 - Lag	_2_4_6_8
A	External Lag	_____
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Reserved		0
1	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	OR-4 (b)	0	System Det 3	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Reserved		System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Reserved		Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Sp Evnt Out 3	0	Reserved		Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Sp Evnt Out 4	0	Reserved		Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Sp Evnt Out 6	0	Reserved		Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Sp Evnt Out 7	0	Reserved		Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0			8
9	Reserved		NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0			9
A	Detector Fail	0	OR-4	0	Reserved		EV-C	0	DELAY-A	0			A
B	Monitor Reset	0	OR-5	0	Reserved		EV-D	0	DELAY-B	0			B
C	Reserved		OR-6	0	Reserved		RR-1	0	DELAY-C	0			C
D	Central Control	0	AND-4	0	Reserved		RR-2	0	DELAY-D	0			D
E	Excl. Ped DW	0	NAND-1	0	Reserved		Spec. Event 1	0	DELAY-E	0			E
F	Excl. Ped WK	0	NAND-2	0	Reserved		Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names ---->	Phase 1	2	3	4	5	6	7	8
	Column Numbers ----->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	**0.3**	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	**0.0**	<C/5+1+C>

7-Wire Master

Time Before Yellow	**0.0**	<F/1+C+E>
Phase Number	**0**	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time Before Yellow	**0.0**	<F/1+D+E>
Phase Number	**0**	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	**0.7**	<F/1+0+6>
Short Failure	**0.7**	<F/1+0+7>

Power Cycle Correction (Default = 0.5)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	A RR1-2, Sp Ev 1	B Sp Ev 2	C Emer Veh	Row
				A
Ped F.D.W.	0	0	0	B
Initial	0	0	0	C

Preempt Minimums <C+0+F=1>

Column Numbers ----->		0	1	2	3	1	3
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7	2	123 8	0.0	0.0
1		40	45_7	6	123 8	0.0	0.0
2		41	45_7	4	123 8	8.0	0.0
3		42	45_7	8	123 8	8.0	0.0
4		43	45_7	2	123 8	0.0	0.0
5		44	45_7	6	123 8	0.0	0.0
6		45	45_7	4	123 8	0.0	0.0
7		46	45_7	8	123 8	0.0	0.0
8		47	67	2	123 8	0.0	0.0
9		48	67	6	123 8	0.0	0.0
A		49	67	4	123 8	0.0	0.0
B		50	67	8	123 8	0.0	0.0
C		55	45_7	5	123 8	0.0	0.0
D		56	45_7	1	123 8	0.0	0.0
E		57	45_7	7	123 8	0.0	0.0
F		58	45_7	3	123 8	0.0	0.0

		4	5	6	7	2	4
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7	5	123 8	0.0	0.0
1		60	45_7	1	123 8	0.0	0.0
2		61	45_7	7	123 8	0.0	0.0
3		62	45_7	3	123 8	0.0	0.0
4		63	45_7	2	123 8	0.0	0.0
5		64	45_7	6	123 8	0.0	0.0
6		65	45_7	4	123 8	0.0	0.0
7		66	45_7	8	123 8	0.0	0.0
8		67	2	2	123 8	0.0	0.0
9		68	2	6	123 8	0.0	0.0
A		69	2	4	123 8	0.0	0.0
B		70	2	8	123 8	0.0	0.0
C		76	45_7	2	123 8	0.0	0.0
D		77	45_7	6	123 8	0.0	0.0
E		78	45_7	4	123 8	0.0	0.0
F		79	45_7	8	123 8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ----->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

Dial-Back Telephone Number <C+0+C=5>

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	06 : 30	1	A	_23456_
2	10 : 00	2	A	_23456_
3	15 : 00	3	A	_23456_
4	18 : 30	2	A	_23456_
5	21 : 00	E	A	_23456_
6	08 : 00	2	A	1_____7
7	21 : 00	E	A	1_____7
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 01	0	_23456_	_2_4_6_8
06 : 30	0	_23456_	12_456_8
00 : 01	0	1_____7	_2_4_6_8
08 : 00	0	1_____7	12_456_8
21 : 00	0	1234567	_2_4_6_8
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 = Permit Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Name	Type	EWStreet	NSStreet	Group	Drop#	Area	AreaAddr	Channel	Sys Ref #	Last Change	FM Name
Malden & De	233RV2.X	Delmar	Malden	NONE	3	1	41	COM1:	1	#########	NONE

		Coord Minimums														Bar	
																Hour	Minute
0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1
Page 0 <C/5>																	

Notes are in Column A, Rows 32 to 40

INTERSECTION: Malden & Sprucewood

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **3**

N/S Street Name: **Malden**
E/W Street Name: **Sprucewood**

Last Database Change: **4/6/2018 11:23**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**2**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**42**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	9	0	7	0	9	0	7
1	Ped FDW	0	15	0	11	0	15	0	11
2	Min Green	7	26	7	10	7	26	7	10
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0
6	Max Gap	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0
7	Min Gap	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0
8	Max Limit	7	26	7	20	7	26	7	20
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	8	0	0	0	4	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	3.0	3.3	3.0	3.3	3.0	3.3	3.0	3.3
F	Red Clear	1.0	3.1	1.0	2.4	1.0	3.1	1.0	2.4

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	30	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	30	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	5
EV-A Clear	10
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

Row	F
0	Permit **12345678**
1	Red Lock _____
2	Yellow Lock _____
3	Min Recall _____
4	Ped Recall **_2___6__**
5	*View Set Peds* **- - - - -**
6	Rest In Walk _____
7	Red Rest _____
8	Dual Entry **_2_4_6_8**
9	Max Recall **_2___6__**
A	Soft Recall _____
B	Max 2 _____
C	Cond. Service _____
D	Man Cntrl Calls _____
E	Yellow Start **_2___6__**
F	First Phases **__3___7_**

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ----->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Reserved
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Reserved
4 = Reserved
5 = Reserved
6 = Reserved
7 = Reserved
8 = Reserved

Row	Column Numbers ---->	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases	1_3_5_7_	4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	_2__5___	A
B	EV-B Phases		B
C	EV-C Phases		C
D	EV-D Phases		D
E	Extra 1 Config. Bits	1_3_5___	E
F	IC Select (Interconnect)	_2_____	F

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Ped for 2P Output	_2_____
Ped for 6P Output	_____6__
Ped for 4P Output	___4____
Ped for 8P Output	_____8
Yellow Flash Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Adv Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	_2_4_6_8
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	_2_4_6_8

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name ----->									
0	Cycle Length	80	80	85	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	51	51	0	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	14	14	14	0	0	0	0	0	0
4	Phase 4 - ForceOff	36	38	38	0	0	0	0	0	0
5	Phase 5 - ForceOff	51	51	51	0	0	0	0	0	0
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	14	14	0	0	0	0	0	0
8	Phase 8 - ForceOff	38	38	38	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	0	0	0	0	0	0	0	0	0
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	3	3	3	0	0	0	0	0	0
E	Hold Release	255	255	255	0	0	0	0	0	0
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

(Coord Extra Bit 1 = Programmed WALK Time for Sync Phases)

Row		E
0		
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	2 6
9	Plan 9 - Sync	2 6
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	14	14	14	0	0	0	0	0	0
2	Perm 2 - End	16	16	16	0	0	0	0	0	0
3	Perm 3 - Start	38	38	38	0	0	0	0	0	0
4	Perm 3 - End	41	41	41	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	3	3 7	3 7	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase				12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase	4 8	4 8	4 8						
D	Perm 2 Ped Phase	4 8	4 8	4 8						
E	Perm 3 Veh Phase	5	1 5	1 5						
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Row		F
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	2 4 6 8
5	Plan 5 - Lag	2 4 6 8
6	Plan 6 - Lag	2 4 6 8
7	Plan 7 - Lag	2 4 6 8
8	Plan 8 - Lag	2 4 6 8
9	Plan 9 - Lag	2 4 6 8
A	External Lag	
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Reserved		0
1	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	OR-4 (b)	0	System Det 3	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Reserved		System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Reserved		Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Sp Evnt Out 3	0	Reserved		Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Sp Evnt Out 4	0	Reserved		Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Sp Evnt Out 6	0	Reserved		Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Sp Evnt Out 7	0	Reserved		Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0			8
9	Reserved		NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0			9
A	Detector Fail	0	OR-4	0	Reserved		EV-C	0	DELAY-A	0			A
B	Monitor Reset	0	OR-5	0	Reserved		EV-D	0	DELAY-B	0			B
C	Reserved		OR-6	0	Reserved		RR-1	0	DELAY-C	0			C
D	Central Control	0	AND-4	0	Reserved		RR-2	0	DELAY-D	0			D
E	Excl. Ped DW	0	NAND-1	0	Reserved		Spec. Event 1	0	DELAY-E	0			E
F	Excl. Ped WK	0	NAND-2	0	Reserved		Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names ---->	Phase 1	2	3	4	5	6	7	8
	Column Numbers ---->								
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time Before Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time Before Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.5)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Row		A (RR1-2, Sp Ev 1)	B (Sp Ev 2)	C (Emer Veh)
A	Ped F.D.W.	0	0	0
B	Initial	0	0	0
C				

Preempt Minimums <C+0+F=1>

Column Numbers ----->		0	1	2	3	1	3	
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over	Row
0		39	45_7	2	123 8	0.0	0.0	0
1		40	45_7	6	123 8	0.0	0.0	1
2		41	45_7	4	123 8	8.0	0.0	2
3		42	45_7	8	123 8	8.0	0.0	3
4		43	45_7	2	123 8	0.0	0.0	4
5		44	45_7	6	123 8	0.0	0.0	5
6		45	45_7	4	123 8	0.0	0.0	6
7		46	45_7	8	123 8	0.0	0.0	7
8		47	67	2	123 8	0.0	0.0	8
9		48	67	6	123 8	0.0	0.0	9
A		49	67	4	123 8	0.0	0.0	A
B		50	67	8	123 8	0.0	0.0	B
C		55	45_7	5	123 8	0.0	0.0	C
D		56	45_7	1	123 8	0.0	0.0	D
E		57	45_7	4 7	123 8	0.0	0.0	E
F		58	45_7	3 8	123 8	0.0	0.0	F

		4	5	6	7	2	4	
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over	Row
0		59	45_7	5	123 8	0.0	0.0	0
1		60	45_7	1	123 8	0.0	0.0	1
2		61	45_7	7	123 8	0.0	0.0	2
3		62	45_7	3	123 8	0.0	0.0	3
4		63	45_7	2	123 8	0.0	0.0	4
5		64	45_7	6	123 8	0.0	0.0	5
6		65	45_7	4	123 8	0.0	0.0	6
7		66	45_7	8	123 8	0.0	0.0	7
8		67	2	2	123 8	0.0	0.0	8
9		68	2	6	123 8	0.0	0.0	9
A		69	2	4	123 8	0.0	0.0	A
B		70	2	8	123 8	0.0	0.0	B
C		76	45_7	2	123 8	0.0	0.0	C
D		77	45_7	6	123 8	0.0	0.0	D
E		78	45_7	4	123 8	0.0	0.0	E
F		79	45_7	8	123 8	0.0	0.0	F

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ----->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

Dial-Back Telephone Number <C+0+C=5>

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	06 : 30	1	A	_23456_
2	10 : 00	2	A	_23456_
3	15 : 00	3	A	_23456_
4	18 : 30	2	A	_23456_
5	21 : 00	E	A	_23456_
6	08 : 00	2	A	1_____7
7	21 : 00	E	A	1_____7
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 01	0	_23456_	_2_4_6_8
06 : 30	0	_23456_	_23456_8
10 : 00	0	_23456_	12345678
21 : 00	0	1234567	_2_4_6_8
00 : 01	0	1_____7	_2_4_6_8
08 : 00	0	1_____7	12345678
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 = Permit Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Name	Type	EWStreet	NSStreet	Group	Drop#	Area	AreaAddr	Channel	Sys Ref #	Last Change	FM Name
Malden & Sp	233RV2.X	Sprucewood	Malden	NONE	2	1	42	COM1:	3	#########	NONE

		Coord Minimums														Bar	
																Hour	Minute
0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1
Page 0 <C/5>																	

Notes are in Column A, Rows 32 to 40

INTERSECTION: Malden & Normandy

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **2**

N/S Street Name: **Malden**
E/W Street Name: **Normandy**

Last Database Change: **4/6/2018 11:21**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**43**	<C/0+0+3>
QuicNet Channel	**COM1:**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	8	0	7	0	8	0	7	0
1	Ped FDW	0	16	0	15	0	16	0	15	1
2	Min Green	7	26	0	10	7	26	7	10	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	Veh Extension	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	5
6	Max Gap	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	6
7	Min Gap	2.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	7
8	Max Limit	7	26	0	24	7	26	7	24	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	Sequence To	0	0	0	0	0	0	4	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	10	C
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	3.0	3.3	0.0	3.3	3.0	3.3	3.0	3.3	E
F	Red Clear	1.0	2.7	0.0	2.6	1.0	2.7	1.0	2.6	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	30	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	30	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	30	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	30	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	10
EV-B Delay	0
EV-B Clear	10
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	12_45678	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_2___6__	4
View Set Peds	- - - - -	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	_2_4_6_8	8
Max Recall	_2___6__	9
Soft Recall	_____	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	_2___6__	E
First Phases	___4___8	F

Phase Functions <C+0+F=1>

Row	*Column Numbers ---->*	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ---->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Reserved
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Reserved
4 = Reserved
5 = Reserved
6 = Reserved
7 = Reserved
8 = Reserved

Row	*Column Numbers ---->*	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases	1___5_7_	4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	_2___6__	A
B	EV-B Phases	___4__7_	B
C	EV-C Phases		C
D	EV-D Phases		D
E	Extra 1 Config. Bits	1_3_5___	E
F	IC Select (Interconnect)	_2_____	F

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Ped for 2P Output	_2_____
Ped for 6P Output	_____6__
Ped for 4P Output	___4____
Ped for 8P Output	_____8
Yellow Flash Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Adv Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	_2_4_6_8
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Vehicle Calls	12_45678
Start-up Ped Calls	_2_4_6_8

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C+0+C=5>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9
	Plan Name ----->									
0	Cycle Length	80	80	85	0	0	0	0	0	0
1	Phase 1 - ForceOff	43	43	54	0	0	0	0	0	0
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0
4	Phase 4 - ForceOff	30	30	41	0	0	0	0	0	0
5	Phase 5 - ForceOff	43	43	54	0	0	0	0	0	0
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	0	0	13	0	0	0	0	0	0
8	Phase 8 - ForceOff	30	30	41	0	0	0	0	0	0
9	Ring Offset	0	0	0	0	0	0	0	0	0
A	Offset 1	2	21	30	0	0	0	0	0	0
B	Offset 2	0	0	0	0	0	0	0	0	0
C	Offset 3	0	0	0	0	0	0	0	0	0
D	Perm 1 - End	3	3	3	0	0	0	0	0	0
E	Hold Release	255	255	255	0	0	0	0	0	0
F	Zone Offset	0	0	0	0	0	0	0	0	0

Coordination - Bank 1 <C+0+C=1>

(Coord Extra Bit 1 = Programmed WALK Time for Sync Phases)

Row		E
0		
1	Plan 1 - Sync	2 6
2	Plan 2 - Sync	2 6
3	Plan 3 - Sync	2 6
4	Plan 4 - Sync	2 6
5	Plan 5 - Sync	2 6
6	Plan 6 - Sync	2 6
7	Plan 7 - Sync	2 6
8	Plan 8 - Sync	2 6
9	Plan 9 - Sync	2 6
A	NEMA Sync	
B	NEMA Hold	
C		
D		
E	Coord Extra	
F		

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9
0	Ped Adjustment	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	30	30	13	0	0	0	0	0	0
2	Perm 2 - End	33	33	15	0	0	0	0	0	0
3	Perm 3 - Start	0	0	41	0	0	0	0	0	0
4	Perm 3 - End	0	0	43	0	0	0	0	0	0
5	Reservice Time	0	0	0	0	0	0	0	0	0
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase	4 8	4 8	7	12345678	12345678	12345678	12345678	12345678	12345678
B	Perm 1 Ped Phase	4 8	4 8		12345678	12345678	12345678	12345678	12345678	12345678
C	Perm 2 Veh Phase	1 5	1 5	4 8						
D	Perm 2 Ped Phase			4 8						
E	Perm 3 Veh Phase			1 5						
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C+0+C=2>

Row		F
0	Free Lag	2 4 6 8
1	Plan 1 - Lag	2 4 6 8
2	Plan 2 - Lag	2 4 6 8
3	Plan 3 - Lag	2 4 6 8
4	Plan 4 - Lag	2 4 6 8
5	Plan 5 - Lag	2 4 6 8
6	Plan 6 - Lag	2 4 6 8
7	Plan 7 - Lag	2 4 6 8
8	Plan 8 - Lag	2 4 6 8
9	Plan 9 - Lag	2 4 6 8
A	External Lag	
B		
C		
D		
E		
F		

Lag Phases <C+0+C=1>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Reserved		0
1	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	OR-4 (b)	0	System Det 3	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	Reserved		System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	Reserved		Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Reserved		Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Sp Evnt Out 3	0	Reserved		Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Sp Evnt Out 4	0	Reserved		Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Sp Evnt Out 5	0	Reserved		Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Sp Evnt Out 6	0	Reserved		Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Sp Evnt Out 7	0	Reserved		Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0			8
9	Reserved		NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0			9
A	Detector Fail	0	OR-4	0	Reserved		EV-C	0	DELAY-A	0			A
B	Monitor Reset	0	OR-5	0	Reserved		EV-D	0	DELAY-B	0			B
C	Reserved		OR-6	0	Reserved		RR-1	0	DELAY-C	0			C
D	Central Control	0	AND-4	0	Reserved		RR-2	0	DELAY-D	0			D
E	Excl. Ped DW	0	NAND-1	0	Reserved		Spec. Event 1	0	DELAY-E	0			E
F	Excl. Ped WK	0	NAND-2	0	Reserved		Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time Before Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time Before Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row	1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	Sequence To	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

	A	B	C	Row
	RR1-2, Sp Ev 1	Sp Ev 2	Emer Veh	
				A
Ped F.D.W.	0	0	0	B
Initial	0	0	0	C

Preempt Minimums <C+0+F=1>

Power Cycle Correction (Default = 0.5)

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Column Numbers ----->		0	1	2	3	1	3	
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over	Row
0		39	45_7	2	123 8	0.0	0.0	0
1		40	45_7	6	123 8	0.0	0.0	1
2		41	45_7	4	123 8	8.0	0.0	2
3		42	45_7	8	123 8	8.0	0.0	3
4		43	45_7	2	123 8	0.0	0.0	4
5		44	45_7	6	123 8	0.0	0.0	5
6		45	45_7	4	123 8	0.0	0.0	6
7		46	45_7	8	123 8	0.0	0.0	7
8		47	67	2	123 8	0.0	0.0	8
9		48	67	6	123 8	0.0	0.0	9
A		49	67	4	123 8	0.0	0.0	A
B		50	67	8	123 8	0.0	0.0	B
C		55	45_7	5	123 8	0.0	0.0	C
D		56	45_7	1	123 8	0.0	0.0	D
E		57	45_7	4 7	123 8	0.0	0.0	E
F		58	45_7	3	123 8	0.0	0.0	F

		4	5	6	7	2	4	
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over	Row
0		59	45_7	5	123 8	0.0	0.0	0
1		60	45_7	1	123 8	0.0	0.0	1
2		61	45_7	7	123 8	0.0	0.0	2
3		62	45_7	3	123 8	0.0	0.0	3
4		63	45_7	2	123 8	0.0	0.0	4
5		64	45_7	6	123 8	0.0	0.0	5
6		65	45_7	4	123 8	0.0	0.0	6
7		66	45_7	8	123 8	0.0	0.0	7
8		67	2	2	123 8	0.0	0.0	8
9		68	2	6	123 8	0.0	0.0	9
A		69	2	4	123 8	0.0	0.0	A
B		70	2	8	123 8	0.0	0.0	B
C		76	45_7	2	123 8	0.0	0.0	C
D		77	45_7	6	123 8	0.0	0.0	D
E		78	45_7	4	123 8	0.0	0.0	E
F		79	45_7	8	123 8	0.0	0.0	F

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ----->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

Dial-Back Telephone Number <C+0+C=5>

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	06 : 30	1	A	_23456_
2	10 : 00	2	A	_23456_
3	15 : 00	3	A	_23456_
4	18 : 30	2	A	_23456_
5	21 : 00	E	A	_23456_
6	08 : 00	2	A	1_____7
7	21 : 00	E	A	1_____7
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 01	0	_23456_	_2_4_6_8
06 : 30	0	_23456_	12_456_8
15 : 00	0	_23456_	12_45678
18 : 30	0	_23456_	12_456_8
21 : 00	0	1234567	_2_4_6_8
00 : 01	0	1_____7	_2_4_6_8
08 : 00	0	1_____7	12_456_8
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 = Permit Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Name	Type	EWStreet	NSStreet	Group	Drop#	Area	AreaAddr	Channel	Sys Ref #	Last Change	FM Name
Malden & Nc	233RV2.X	Normandy	Malden	NONE	1	1	43	COM1:	2	#########	NONE

		Coord Minimums														Bar Hour	Minute
0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0	1

Page 0 <C/5>

Notes are in Column A, Rows 32 to 40