



2025 Mer Bleue Road

Transportation Impact Assessment

Prepared for:

Mer Bleue Orleans Co-Tenancy – DV

Prepared by:

Stantec Consulting Ltd.

April 22, 2025

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1.0 SCREENING

1.1 SUMMARY OF DEVELOPMENT

Municipal Address	570 March Road
Description of Location	The property consists of vacant land located in a suburban area designated as an Evolving Neighborhood in the City of Ottawa's Official Plan. It falls under the zoning regulations of By-law 2008-250. The site is situated at the northwest corner of Roger Pharand Street and Noella Leclair Way. It lies within a block bounded by the intersections of Innes Road & Mer-Bleue Road and Innes Road & Noella Leclair Way to the north, and Mer-Bleue Road & Roger Pharand Street and Roger Pharand Street & Noella Leclair Way to the south.
Land Use Classification	Mixed Use/Commercial Zones
Development Size (units)	1
Development Size (m ²)	3,969.6
Number of Accesses and Locations	7 – The plaza currently has 4 general traffic entrances and 1 truck loading entrance from Roger Pharand Street. The proposed development will add 1 private entrance from Noella Leclair Way for general traffic and 1 private approach from Roger Pharand Street for trucks.
Phase of Development	3
Buildout Year	Fall 2026

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

1.2 TRIP GENERATION TRIGGER

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

Land Use Type	Min. Dev. Size (60 Trips)	Triggered
Single-Detached	60 units	✗
Multi-Use Family (Low-Rise)	90 units	✗
Multi-Use Family (High-Rise)	150 units	✗
Office	1,400 m ²	✗
Industrial (Lab)	7,000 m ²	✗
Fast-food restaurant or coffee shop	110 m ²	✗
Destination retail	1,800 m ²	✓
Gas station or convenience market	90 m ²	✗

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

If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.



1.3 LOCATION TRIGGERS

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Cross-Town Bikeway Networks?		x
Is the development in a Design Priority Area (DPA), Transit-oriented Development (TOD) zone, or Protected Major Transit Station Area (PMTSA)? *		x

*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA. PMTSAs are identified in Schedule C1 – Protected Major Transit Station Areas (PMTSA).

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

1.4 SAFETY TRIGGERS

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		x
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		x
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	✓	
Is the proposed driveway within auxiliary lanes of an intersection?		x
Does the proposed driveway make use of an existing median break that serves an existing site?		x
Is there a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	✓	
Does the development include a drive-thru facility?		x

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

1.5 SUMMARY

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?		x
Does the development satisfy the Safety Trigger?	✓	

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



2.0 SCOPING

2.1 EXISTING AND PLANNED CONDITIONS

2.1.1 Proposed Development

This Transportation Impact Assessment (TIA) has been prepared in support of the site plan application for the proposed development at 2025 Mer Bleue Road (southwest corner of Mer Bleue Road and Innes Road) in Ottawa, Ontario. The site is currently vacant and designated for commercial use. The proposed development consists of a 3,598 m² retail food store with associated parking, loading facilities, and active transportation infrastructure.

The site is bound by Mer Bleue Road to the west, Innes Road to the north, Roger Pharand Street to the south, Noella Leclair Way to the east, and adjacent commercial properties to the west and south. Figure 1 illustrates the site location.

Figure 1 - Site Location



The subject site is zoned Arterial Mainstreet (AM) under the City of Ottawa's Zoning By-Law. According to the zoning designation, the purpose of the AM Zone is to:

- Accommodate a broad range of uses, including retail, service commercial, office, residential, and institutional uses in a compact, mixed-use, and pedestrian-friendly environment;



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Scoping

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- Facilitate the development of areas with high levels of accessibility for all modes of transportation, including transit, walking, and cycling; and
- Allow for a mix of uses that contribute to the creation of vibrant, liveable communities.

The proposed development will feature seven access points:

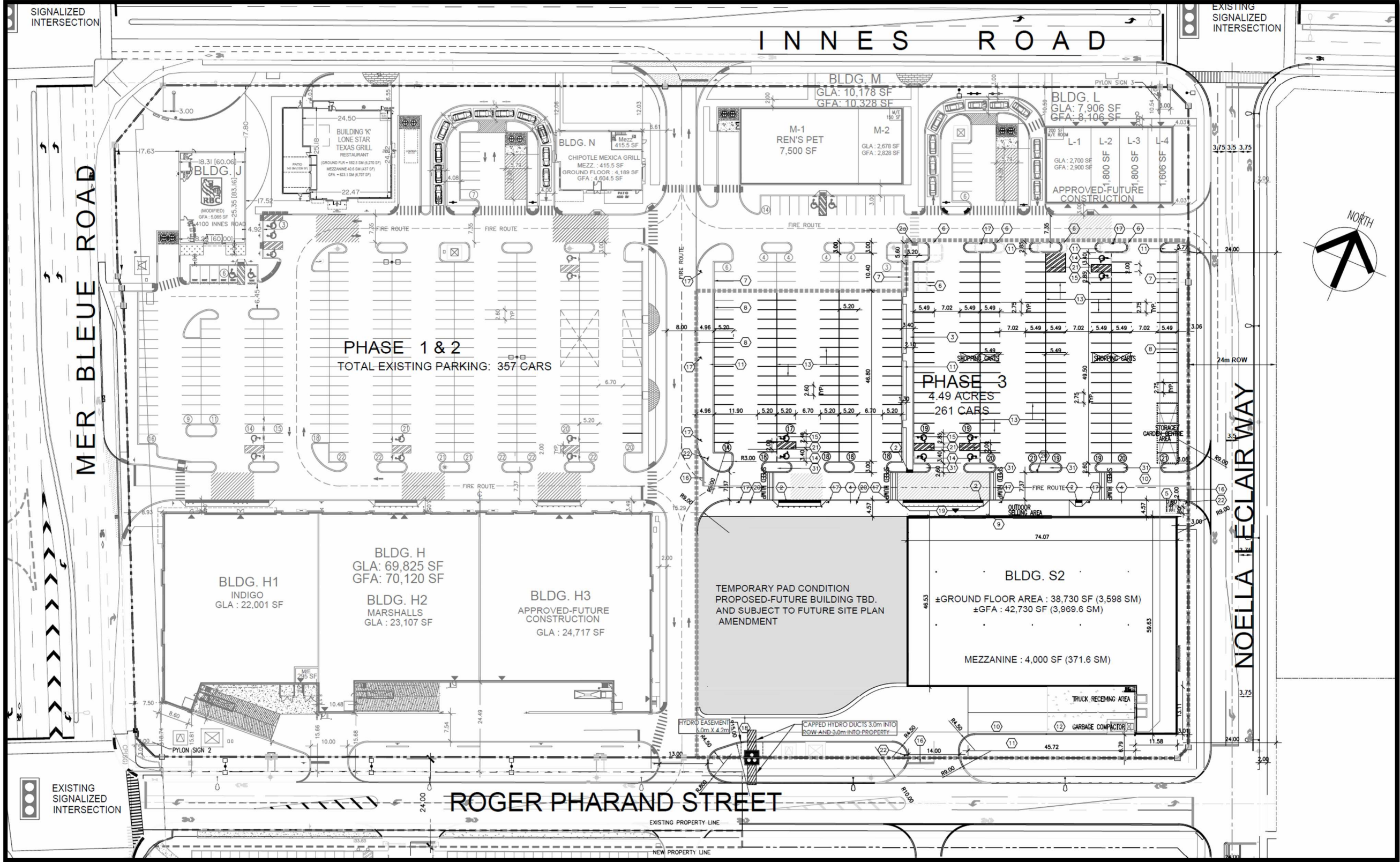
- Four general traffic entrances and one truck loading entrance currently exist along Roger Pharand Street.
- A new private entrance from Noella Leclair Way will be added for general traffic.
- A new private approach from Roger Pharand Street will be added specifically for truck loading and deliveries.

The full build-out and occupancy of the proposed development are anticipated to occur in 2026, in a single phase. The development includes 261 parking spaces, and 60 bicycle parking spaces, exceeding the minimum by-law requirement of 123 spaces, and 16 bicycle parking spaces to support active transportation. This includes 16 parking spaces that have already been constructed at the north end of the existing parking lot that fall within the site boundaries. In addition, two loading spaces are provided for operational needs, and 8 barrier-free spaces, are incorporated to ensure accessibility compliance. This includes 2 barrier-free spaces that have already been constructed at the north end of the existing parking lot.

Figure 2 illustrates the proposed development site plan, highlighting the layout of parking, loading, and access routes. The site design emphasizes safe and efficient circulation for all modes of transportation while integrating with the surrounding transportation network.



Figure 2 - Proposed Development Site Plan



2.1.2 Existing Conditions

2.1.2.1 Roads and Traffic Control

The roadways and intersections under consideration in the study area are described as follows:

Innes Road is a municipal four-lane arterial roadway with a posted speed limit of 60 km/h. Across the frontage of the study area, Innes Road features two through lanes in each direction. At the intersection with Mer Bleue Road, Innes Road includes one left-turn lane, one right-turn lane, and two through lanes in both the eastbound and westbound directions. At the intersection with Noella Leclair Way, Innes Road includes one left-turn lane, one through lane, and one shared through/right-turn lane in both the eastbound and westbound directions. Sidewalks and designated cycling lanes are provided on both sides of the roadway, ensuring connectivity for both pedestrians and cyclists.

Innes Road is designated as an Arterial Mainstreet in the City of Ottawa's Official Plan, accommodating multi-modal transportation, including pedestrians, cyclists, transit users, and motorists. This section of Innes Road is also part of the City's Cross-Town Cycling Network, facilitating east-west active transportation. On-street parking is prohibited along Innes Road in the vicinity of the study area.

The intersections of Innes Road and Mer Bleue Road, as well as Innes Road and Noella Leclair Way are signalized.

Mer-Bleue Road is a municipal two-lane arterial roadway with a posted speed limit of 60 km/h. At the intersection with Innes Road, Mer Bleue Road has two left-turn lanes, one through lane, and one shared through/right-turn lane in both the northbound and southbound directions. At the intersection with Roger Pharand Street, Mer Bleue Road has one left-turn lane, one channelized right-turn lane, and two through lanes in both the northbound and southbound directions. Sidewalks and dedicated cycling lanes are provided on both sides of the roadway, ensuring accessibility and safety for all users.

The cycling lanes along Mer Bleue Road form part of the City's north-south cycling network. On-street parking is prohibited along Mer Bleue Road in the vicinity of the study area. The intersection of Mer Bleue Road and Roger Pharand Street is signalized.

Roger Pharand Street is a municipal two-lane local roadway. At the intersection with Mer Bleue Road, Roger Pharand Street features one left-turn lane and one shared through/right-turn lane in both the eastbound and westbound directions. Sidewalks are provided along both sides of the roadway, ensuring pedestrian connectivity.

Noella Leclair Way is a municipal two-lane local roadway. At the intersection with Innes Road, Rue Noella Leclair has one left-turn lane and one shared through/right-turn lane in both the northbound and southbound directions. Sidewalks and cycling facilities are not provided on Noella Leclair Way.

The existing developments at 2025 Mer Bleue Road includes access points that facilitate efficient circulation and connectivity:

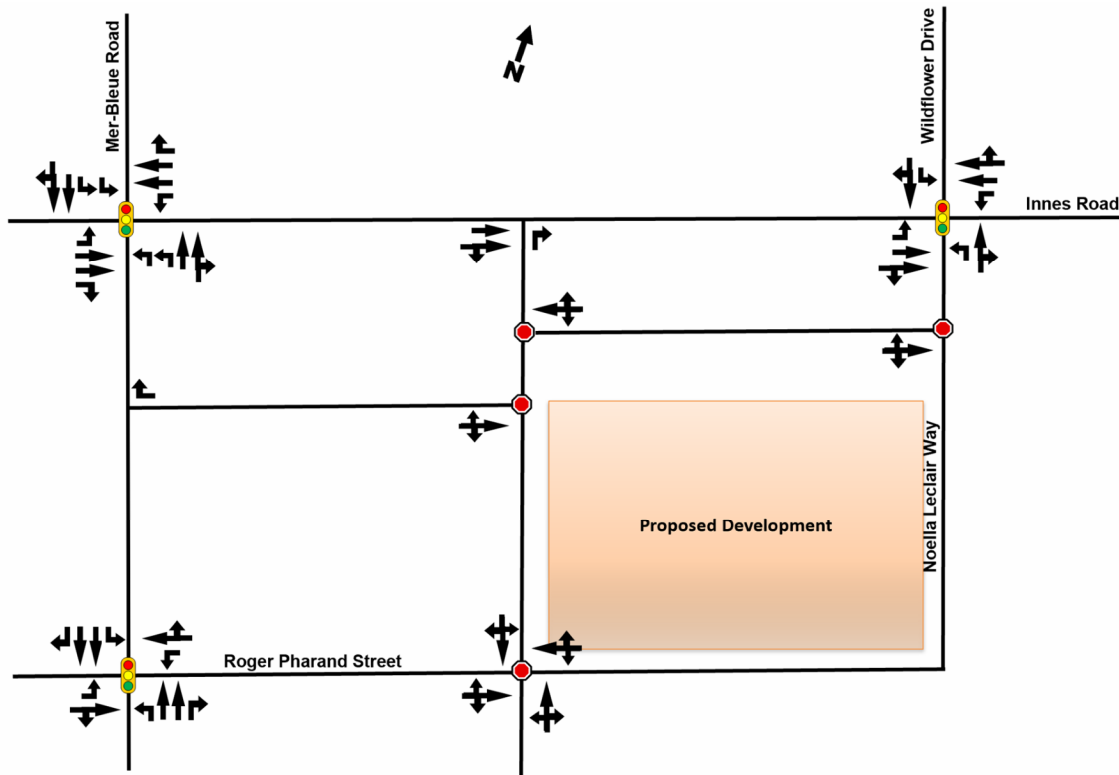
- Innes Road Eastbound (Right-In/Right-Out): Located 150 meters east of the Innes Road and Mer Bleue Road intersection.



- Mer Bleue Road Northbound (Right-In/Right-Out): Situated 75 meters north of the Mer Bleue Road and Roger Pharand Street intersection.

Figure 3 illustrates the existing lane configuration and traffic control.

Figure 3 - Existing Lane Configuration and Traffic Control



2.1.2.2 Walking and Cycling

The active transportation network in the study area surrounding **2025 Mer Bleue Road** provides robust infrastructure to support walking and cycling, promoting safe and sustainable travel options. The existing facilities ensure seamless connectivity to the site and surrounding neighborhoods.

Walking Network

The pedestrian network in the study area includes continuous sidewalks along all major roadways, providing safe and accessible walking routes:

- **Mer Bleue Road:** Features sidewalks on both sides, providing north-south connectivity and direct access to adjacent commercial and residential developments.
- **Innes Road:** Sidewalks on both sides facilitate east-west pedestrian movement and provide connections to nearby transit stops and amenities.

The development is within **400 meters of transit stops** on Mer Bleue Road and Innes Road, offering convenient access for transit users on foot.



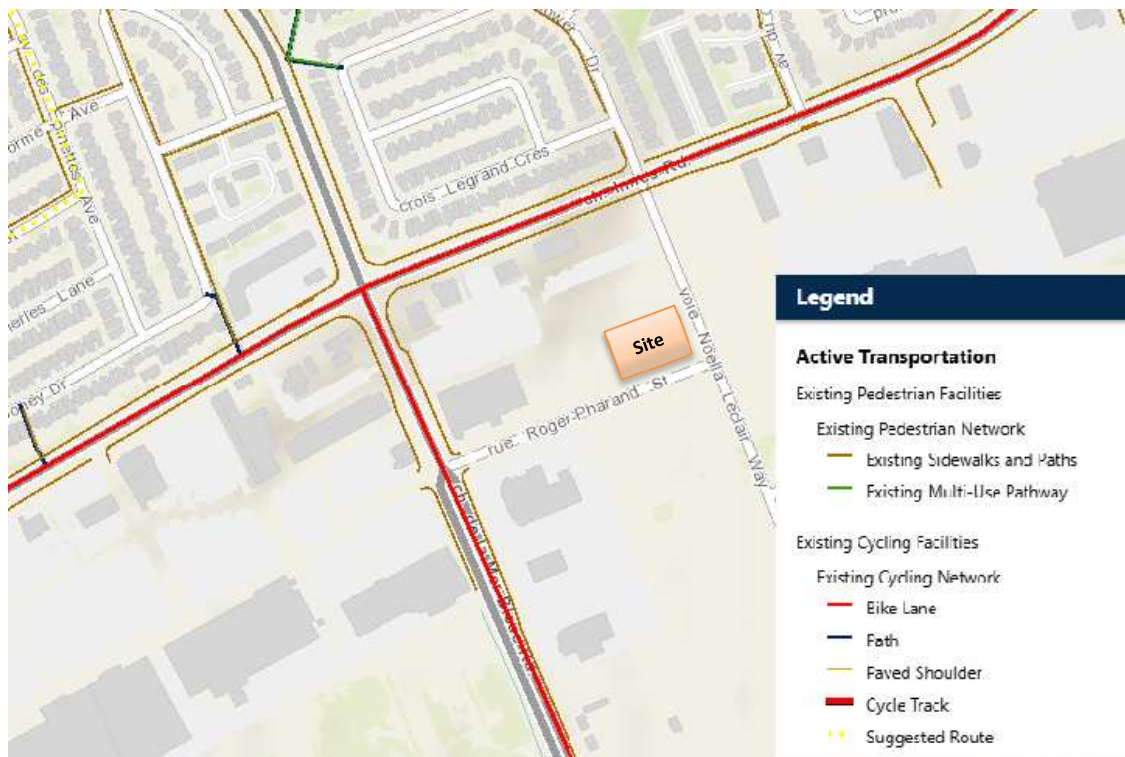
Cycling Network

The study area is well-served by cycling infrastructure, supporting safe and efficient travel for cyclists:

- **Innes Road:** Designated as part of the **Cross-Town Bikeways** in the City of Ottawa's new Transportation Master Plan (TMP), it features dedicated bike lanes on both sides, providing a key east-west route for cycling commuters.
- **Mer Bleue Road:** Equipped with dedicated bike lanes on both sides, facilitating north-south connectivity and linking to nearby commercial areas and transit stops.
- **Connections to Multi-Use Pathways:** MUPs provide connections to surrounding residential streets, including Tooney Drive, Legrand Crescent, and Leclair Crescent, linking the study area to the Avalon and Chapel Hill neighborhoods.

Figure 4 illustrates the existing pedestrian and cycling facilities within the vicinity of the subject site.

Figure 4 - Existing Pedestrian and Cycling Network



Source: geoOttawa, accessed September 2024



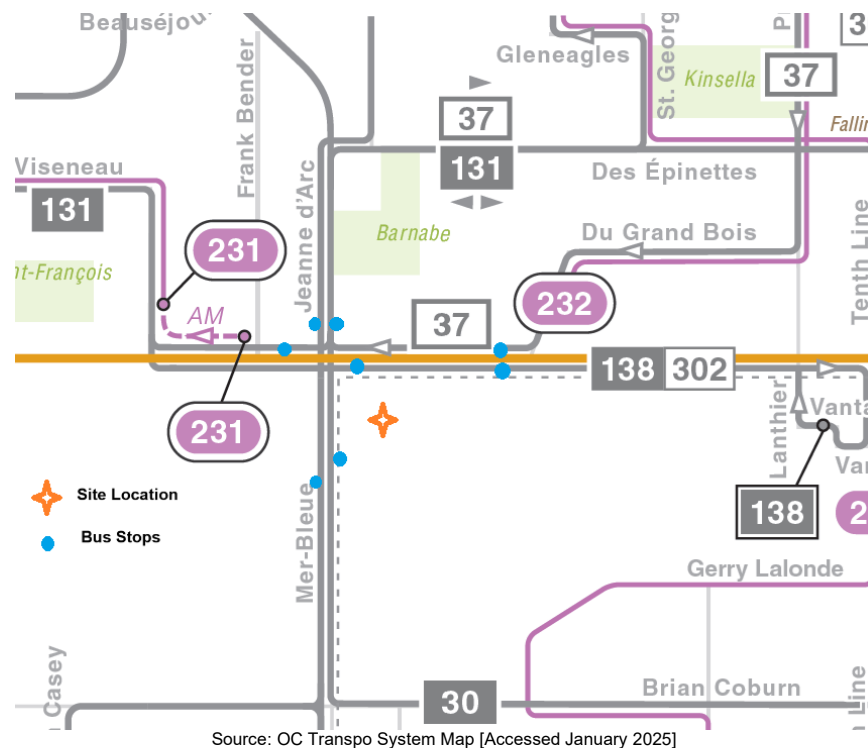
2.1.2.3 Transit

The study area is served by OC Transpo Routes 25, 30, 32, 37, 131 and 138, providing essential transit connections for residents, commuters, and shoppers. These routes ensure accessibility to key destinations across the city, connecting the study area with residential, commercial, and institutional hubs.

- Route 25 runs along Innes Road, offering a vital connection to College La Cité in the westbound direction and Millennium Station in the eastbound direction. It functions as a key east-west transit link, serving both local and regional transit users in the area.
- Route 30 provides a north-south transit connection along Mer Bleue Road. Southbound, it serves Millennium Station, facilitating access to local neighborhoods and transit hubs. Northbound, the route connects to Blair Station, providing commuters with direct access to Ottawa's broader transit network.
- Route 32 also operates along Mer Bleue Road, running southbound to Chapel Hill South and northbound to Blair Station. This route ensures connectivity between the residential areas south of the study area and the city's central transit hubs.
- Route 37 provides transit services to Queenswood Heights, offering connections to residential neighborhoods and nearby commercial centers.
- Route 131 serves both Fallingbrook and Chapel Hill, connecting residential areas to major transit hubs such as Place d'Orléans Station. This route supports local transit needs and provides a link to the city's broader transit network.
- Route 138 operates along Innes Road, providing east-west transit services in the study area. Westbound, it travels towards Place d'Orléans Station, while eastbound it continues towards Innes Road and Tenth Line Road Intersection. This route primarily serves residential communities and commercial centers along the corridor.

Figure 5 illustrates the transit routes and stops.

Figure 5 - Study Area Transit Routes and Stops



2.1.2.4 New Ways to Bus

Effective April 27, 2025, OC Transpo will implement its “New Ways to Bus” transit network redesign. This system-wide overhaul introduces major changes to routes throughout Ottawa, including those that serve the study area. The restructured network aims to improve service reliability, increase frequency on core corridors, and better respond to evolving ridership patterns.

Key Changes Affecting the Study Area

- Route 25 will be extended to operate between Millennium Station and Wateridge Village on weekdays, expanding the coverage of the route further east. This change will likely have minimal impact on the operations in the study area.
- Route 30 will continue to provide service between Millennium Station and Blair Station. However, all trips will now run via Montmère Avenue throughout the day, which will have minimal impact on operations within the study area.
- Route 32 will be adjusted to provide service to Place d'Orléans Station, providing connectivity to the Confederation Line LRT, which may result in additional ridership along the route.
- Route 37 will be discontinued and its service area reallocated across multiple routes:
 - Route 31 will serve du Grand Bois Avenue and Innes Road.
 - Route 35 will cover Prestone Drive and Centrum Boulevard.
 - Route 36 will operate along des Épinettes Avenue and Jeanne d'Arc Boulevard.
 - Route 234 will take over Chartrand Avenue, Duford Drive, Gleneagles Avenue, St. Georges Street, and Prestwick Drive.
- Route 131 will be removed and replaced, and its service area redistributed among several routes:
 - Route 31 will cover Youville Drive, Forest Valley Drive, Meadowglen Drive, Viseneau Drive, and Innes Road.
 - Route 33 will serve Princess Louise Drive, Charlemagne Avenue, Tompkins Avenue, Major Road, and Place d'Orléans Drive.
 - Route 36 will cover Jeanne d'Arc Boulevard between Innes and des Épinettes, and des Épinettes Avenue itself.
 - Route 138 will take over St-Joseph Boulevard between Grey Nuns Drive and Place d'Orléans Drive.
- Route 138 will be revised to operate between Place d'Orléans Station and Hiawatha Park Road, which is unlikely to have much of an operational impact on the study area.

2.1.2.5 Traffic Management Measures

There are currently no traffic management measures in the vicinity of the subject development.



2.1.2.6 Traffic Volumes

Turning movement count (TMC) data was obtained from the City of Ottawa for key intersections within the study area. The most recent counts were collected on the following dates:

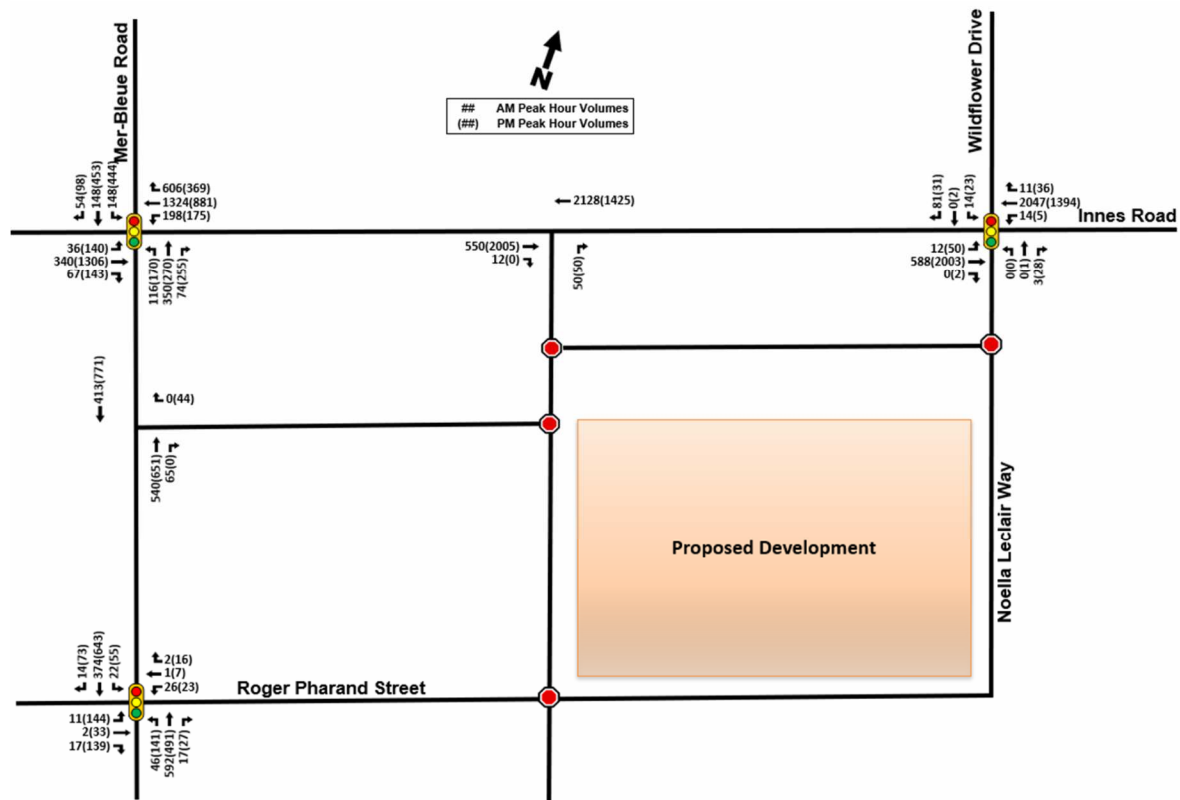
- Innes Road and Mer Bleue Road: January 9, 2020
- Innes Road and Wildflower Drive / Noella Leclair Way: April 19, 2018
- Mer-Bleue Road and Roger Pharand Street: January 15, 2019

Traffic counts from these dates were adjusted to project volumes to 2025, ensuring consistency with current conditions. Traffic volumes between intersections were balanced to align with observed travel patterns. Heavy vehicle (HV) percentages were incorporated to account for commercial traffic impacts in the area. This comprehensive traffic volume assessment ensures accurate representation of current conditions to inform the planning and design of future roadway improvements.

The turning movement counts were used to calibrate existing volumes at key intersections in the study area. Detailed traffic count data and associated signal timing plans are included in **Appendix A**.

The 2025 existing traffic volumes can be seen in **Figure 6** for the AM and PM peak hours.

Figure 6 - 2025 Existing Traffic Volumes



2.1.2.7 Collision History

Collision data for the study area was reviewed for key intersections, focusing on the period between 2017 and 2022. A total of 201 collisions were reported across the three main intersections during this time. The majority of these incidents, 160 (80%), resulted in property damage only, 41 (20%) involved non-fatal injuries, and no fatal injuries were recorded.

The Innes Road and Mer Bleue Road intersection accounted for the highest number of collisions, with 155 reported incidents (77% of the total). Of these, 128 (83%) were property damage only, 27 (17%) resulted in non-fatal injuries, and no fatal injuries occurred. The high frequency of rear-end collisions (76 incidents) may be attributed to queuing during peak periods at this signalized intersection, compounded by the high traffic volume.

The Innes Road and Wildflower Drive/Noella Leclair Way intersection recorded 34 collisions (17% of total collisions). Of these, 25 (74%) were property damage only, and 9 (26%) resulted in non-fatal injuries. Rear-end collisions (26 incidents) were the most common type, reflecting potential conflicts during merging and turning movements.

The Mer Bleue Road and Roger Pharand Street intersection experienced fewer collisions, with 12 reported incidents (6% of the total). Of these, 7 (58%) were property damage only, and 5 (42%) involved non-fatal injuries. Angle/turning collisions accounted for the majority of incidents at this intersection, likely due to the mixed traffic movements at this signalized intersection.

A summary of the detailed historical collision records, including collision types and environmental conditions, is provided in **Appendix B. Table 1** below summarizes the collision statistics for each intersection in the study area.

Table 1 - Collision Statistics

		Innes Road and Mer Bleue Road	Innes Road and Wildflower Drive/Noella Leclair Way	Mer-Bleue Road and Roger Pharand Street
Classification	Property Damage Only	128	25	7
	Non-Fatal Injury	27	9	5
	Fatal Injury	--	--	--
Collision Type	Sideswipe	21	4	1
	Angle / Turning	54	4	9
	Rear End	76	26	2
	Single Motor Vehicle	3	--	--
	Other	1	--	--
Environmental Condition	Clear	132	29	9
	Rain	12	5	3
	Snow	6	--	--
	Freezing Rain	3	--	--
Collision Counterpart	Other Motor Vehicle	152	34	12
	Motorcycles	--	--	--
	Cyclist	--	--	--
	Pedestrian	--	--	--



2.1.3 Planned Conditions

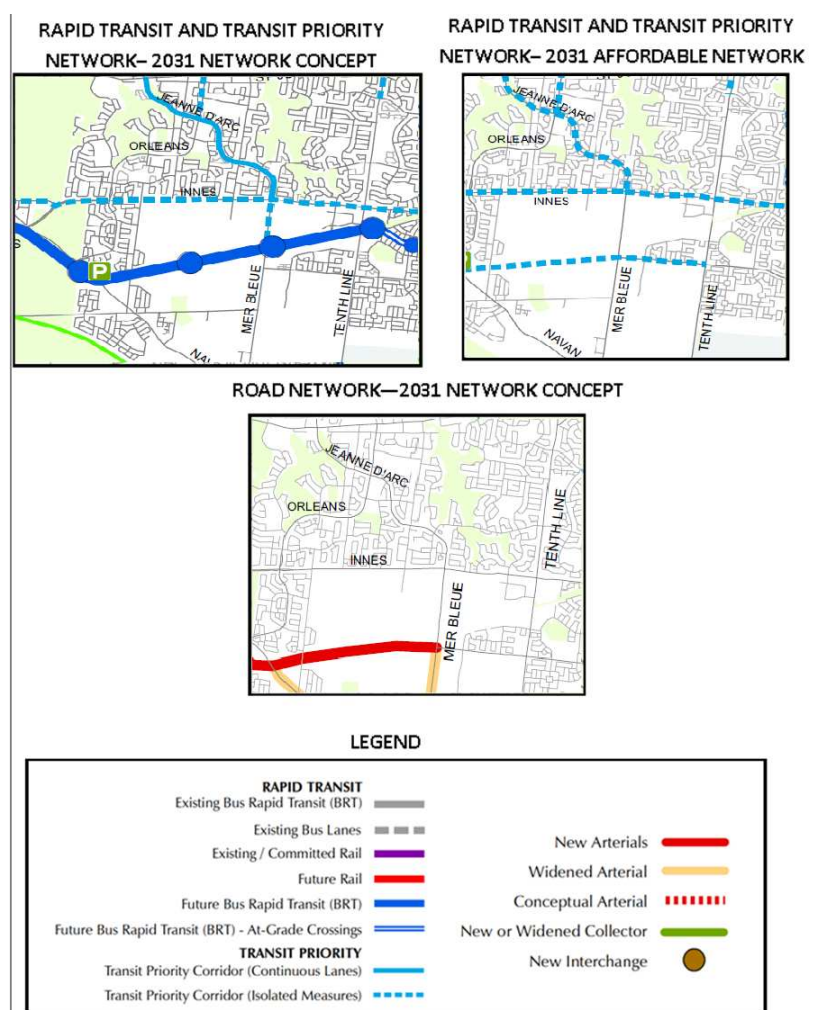
2.1.3.1 Road Network Modifications

Table 2 identifies the City of Ottawa's 2013 Transportation Master Plan (TMP) projects located in the vicinity of the subject site. The City of Ottawa is currently undertaking Part 2 – Capital Infrastructure Plan of the new TMP, anticipated for release in 2025. **Figure 7** illustrates planned network modifications near the proposed development from the 2013 TMP.

Table 2 - City of Ottawa 2013 Transportation Master Plan Projects

Project	Description	TMP Phase
Blair Station / Blackburn Bypass / Navan Road / Mer Bleue Road.	Grade Separated Bus Rapid Transit connecting Blair Station to Blackburn Bypass, Navan Road, and Mer Bleue Road.	2031 Network Concept

Figure 7 - Planned Network Modifications



Source: City of Ottawa 2013 TMP, accessed January 2025



2.1.3.2 Future Background Developments

3996 Innes Road Mixed-Use Development

Located south of Innes Road and west of Mer Bleue Road, the 3996 Innes Road development involves a five-story mixed-use building featuring 20 residential units, 175 m² of pharmacy space, and 200 m² of medical facilities. The development includes 37 parking spaces, with a mix of underground and surface stalls. Access to the site is provided via a single right-in/right-out entrance along Innes Road, approximately 160 meters west of the Innes Road and Mer Bleue Road intersection. The project is expected to impact local traffic patterns minimally due to its low anticipated trip generation rates. The development was planned to be constructed by the year 2022, but was not developed yet at the writing of this report.

2.2 STUDY AREA AND TIME PERIODS

2.2.1 Study Area

The study area includes the following intersections:

1. Innes Road at Mer Bleue Road
2. Innes Road at Noella Leclair Way/Wildflower Drive
3. Mer Bleue Road at Roger Pharand Street
4. Roger Pharand Street at Noella Leclair Way
5. All site access intersections, as shown in Figure 2.

2.2.2 Time Periods

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

- Weekday AM peak hour of roadway; and
- Weekday PM peak hour of roadway.

2.2.3 Horizon Years

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

- 2025 existing conditions;
- 2026 future background conditions;
- 2026 total future conditions (site build-out); and
- 2031 total future conditions (5 years beyond build-out).



2.3 DEVELOPMENT GENERATED TRAVEL DEMAND

2.3.1 Trip Generation

The trip generation and mode share analysis evaluate the number of trips generated by the proposed retail development and the distribution of these trips across various transportation modes. This analysis is essential for understanding the travel demand created by the development and ensuring that the surrounding transportation network can accommodate these trips effectively.

The analysis is based on the TRANS Trip Generation Manual (2020) and the ITE Trip Generation Manual (11th Edition), which provide industry-standard methodologies for estimating trips for commercial land uses. The development, classified as a supermarket under Land Use Code 850, is expected to generate a significant number of trips during the AM and PM peak hours, as well as across peak periods.

Key steps in the trip generation analysis include:

- Calculating person-trips during the AM and PM peak periods and peak hours.
- Converting vehicle trips to person-trips using the appropriate factors from the TRANS Trip Generation Manual.
- Applying mode share distributions to determine the breakdown of trips across driving, transit, cycling, walking, and other modes.
- Disaggregating trips into inbound and outbound flows based on directional splits for peak periods and hours.

This section provides a detailed overview of the trips generated by the proposed development and their allocation by mode, highlighting the anticipated impacts on the surrounding transportation network. The analysis also considers the development's alignment with sustainable transportation goals, emphasizing active and public transit options.

The following **Table 3** outlines the trip generation rates used for the peak hour in this analysis.

Table 3 - Trip Generation Rates

Land Use	Land Use Code (ITE)	AM Peak Hour	PM Peak Hour
Retail - Supermarket (850) (X = 1,000 ft ² GFA) (ITE)	ITE 822 - General Urban/Suburban	N/A	$\ln(T) = 0.81 \ln(X) + 2.92$

Note: T = Average Person Trip Ends

To properly consider multi-modal trips, projected site traffic is converted to projected site-generated person trips. To convert projected ITE vehicle trips to person trips, an auto occupancy factor and non-auto factor is applied to the ITE trip generation rates. According to the City's TIA Guidelines, and based on available American Census data, the typical modal share of non-auto person trips is approximately 10% and the typical auto occupancy is 1.15. When combined/solving for "person trips" (i.e., $\text{Persons} = 1.15 \times \text{Autos} + 0.10 \times \text{Persons}$), a factor of 1.28 is used to convert vehicle trips to person trips. These person trips are then broken down into trips for different modes (vehicle, transit, cycling and walking) by using the mode split from the City of Ottawa's TRANS Trip Generation Manual (2020).



Table 4 - Projected Site Person Trip Generation

Land Use	AM Peak Hour	PM Peak Hour	AM Peak Period	PM Peak Period
Commercial Auto Trips	111	358	222	813
Commercial Person Trips	142	458	284	1040

As shown in **Table 4**, the subject development is projected to generate approximately 142 and 458 trips per hour during weekday morning and afternoon peak hours, respectively.

2.3.2 Travel Mode Shares

The total projected person trips are subdivided by mode share values to determine the number of person trips arriving and departing by travel mode. The subject site falls within the Orleans District as identified in the 2020 TRANS Trip Generation Manual, where the associated Commercial Generator mode share values are as shown in **Table 5**.

Table 5 - Observed Orleans Mode Shares and Counts

Mode	AM Peak (%)	AM Peak Period Trips	AM Peak Hour Trips	PM Peak (%)	PM Peak Period Trips	PM Peak Hour Trips
Auto Driver	77%	219	109	71%	738	325
Auto Passenger	14%	31	16	20%	208	92
Transit	3%	7	3	2%	21	9
Cycling	0%	0	0	1%	10	5
Walking	6%	13	7	5%	52	23

Directional splits for commercial trips were calculated using the trip generation rates from the ITE Trip Generation Manual (11th Edition) and generalized for all modes.

Directional Distribution:

- AM Peak Period: 59% Inbound, 41% Outbound
- PM Peak Period: 50% Inbound, 50% Outbound

Directional splits for inbound and outbound trips are presented in **Table 6** (peak period) and **Table 7** (peak hour), indicating:



Table 6 – Commercial Trips – Directional Splits for Peak Period

Mode	AM Peak Period Inbound Trips	AM Peak Period Outbound Trips	PM Peak Period Inbound Trips	PM Peak Period Outbound Trips
Auto Driver	129	90	369	369
Auto Passenger	18	13	104	104
Transit	4	3	10	10
Cycling	0	0	5	5
Walking	8	5	26	26

Table 7 – Commercial Trips – Directional Splits for Peak Hour

Mode	AM Peak Hour Inbound Trips	AM Peak Hour Outbound Trips	PM Peak Hour Inbound Trips	PM Peak Hour Outbound Trips
Auto Driver	65	45	163	163
Auto Passenger	9	6	46	46
Transit	2	1	5	5
Cycling	0	0	2	2
Walking	4	3	11	11

2.3.3 Trip Distribution and Assignment

The distribution of traffic to / from the proposed development was determined through examination of the Trans Committee's 2011 Origin-Destination (O-D) Survey for the Orleans District. Table 8 provides a summary of the estimated distribution for the traffic generated by the proposed development.

Table 8 - Traffic Distribution Assumptions

Cardinal Direction		Via (to / from)			
		Mer-Bleue Road	Mer-Bleue Road	Innes Road	Innes Road
		North	South	West	East
North	3%	3%			
South	1%		1%		
West	32%	10%		22%	
East	3%				3%
Internal (Orleans)	61%	30%	11%		20%
Total	100%	43%	12%	22%	23%

Site generated trips were assigned to the study area road network based on the trip distribution assumptions outlined in **Table 8** above. **Figure 8** outlines the site assignment assumptions. It should be noted that the red value represents the outbound trips, and the black values represent the inbound trips.

Based on the above assumed distribution, projected site-generated traffic was assigned to the study area network, as shown below in



Figure 9.

Figure 8 - Site Traffic Assignment

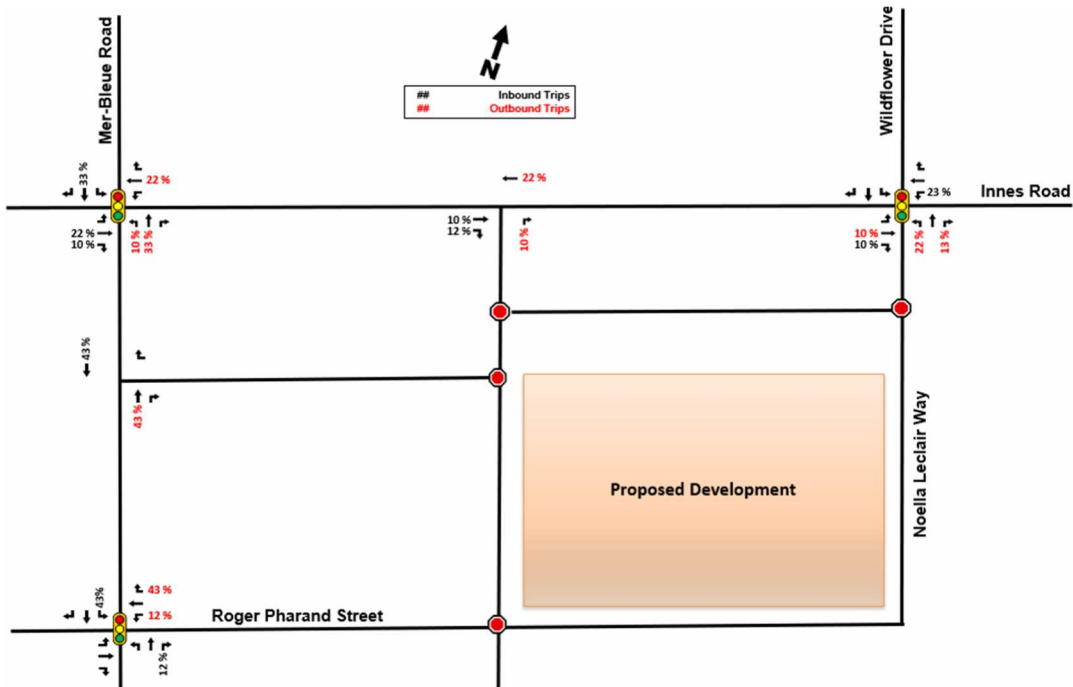
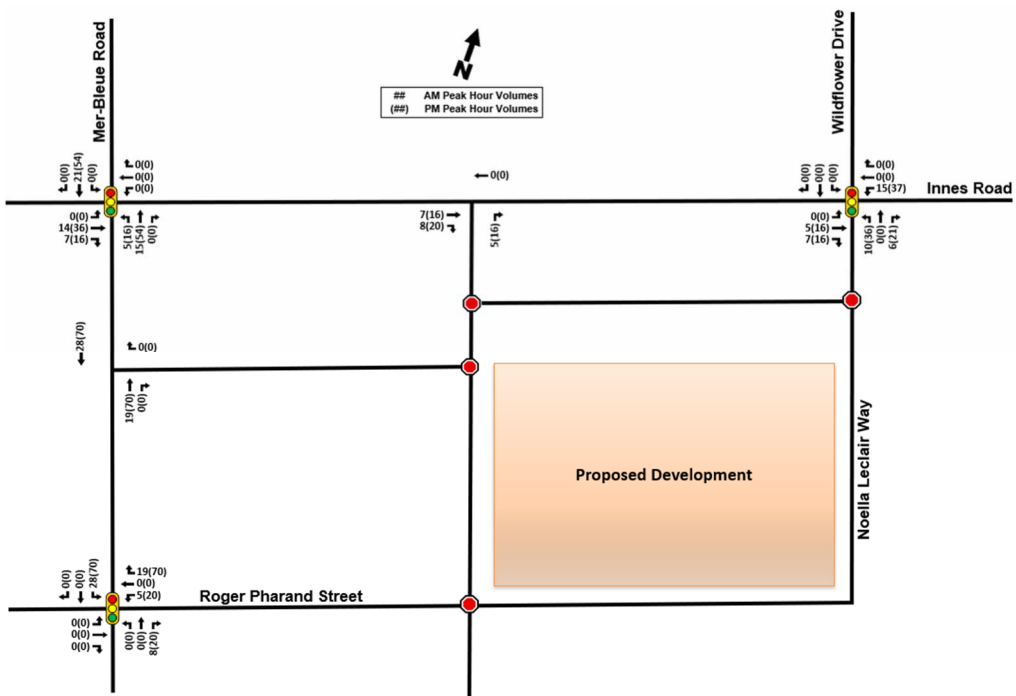


Figure 9 - Projected Site-Generated Traffic



2.4 EXEMPTIONS REVIEW

Table 9 summarizes the Exemptions Review table from the City of Ottawa's 2017 Transportation Impact Assessment Guidelines with revisions effective June 2023.

Table 9 - Exemptions Review

Module	Element	Exemption Considerations	Status
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plans	Not Exempt
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt
4.2 Parking	4.2.1 Parking Supply	Only required for site plans	Not Exempt
	4.2.2 Spillover Parking	Eliminated in 2023 TIA Update	N/A
Network Impact Component			
4.5 Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	Not Exempt
4.6 Neighbourhood Traffic Calming	All Elements	Required if the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1) Access to Collector or Local 2) "Significant sensitive land use presence" 3) Zoning or Subdivision application 4) At least 75 site-generated auto trips 5) Site Trip Infiltration is expected	Exempt
4.7 Transit	4.7.1 Transit Route Capacity	>75 site transit trips	Exempt
	4.7.2 Transit Priority Requirements	>75 site auto trips	Not Exempt
4.8 Network Concept	All Elements	Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	Exempt
4.9 Intersection Design	4.9.1 Intersection Controls (including site accesses)	>75 site auto trips	Not Exempt
	4.9.2 Intersection Design	>75 site auto trips	Not Exempt



3.0 ANALYSIS

3.1 BACKGROUND NETWORK TRAFFIC

3.1.1 Changes to the Background Transportation Network

As outlined in the City of Ottawa's 2013 Transportation Master Plan (TMP), Innes Road and Mer Bleue Road—connecting northward to Jeanne d'Arc Boulevard—are designated as part of a Transit Priority Corridor. This corridor is included in the 2031 Network Concept and is intended to implement measures such as queue jump lanes, transit signal priority, and other improvements that support more efficient bus operations along key arterial routes. However, as these measures are not yet committed or scheduled for implementation, they have not been included in the operational analysis presented in this report.

3.1.2 General Background Growth Rates

A general background growth rate of 1.6% per year was applied to the existing traffic volumes to account for anticipated increases in traffic demand due to ongoing regional development and population growth. This growth rate is based on the traffic projections from the City of Ottawa's EMME model.

The growth rate is consistent with trends in the study area and ensures that background traffic conditions in the analysis scenarios accurately reflect expected future volumes. This rate was applied uniformly across all roadways and intersections within the study area for the 2026 and 2031 horizon years.

3.2 DEMAND RATIONALIZATION

Based on the foregoing information, **Figure 10** and **Figure 11** below show the 2026 Future Background and 2031 Future Background traffic volumes.



Figure 10 - 2026 Future Background Volumes

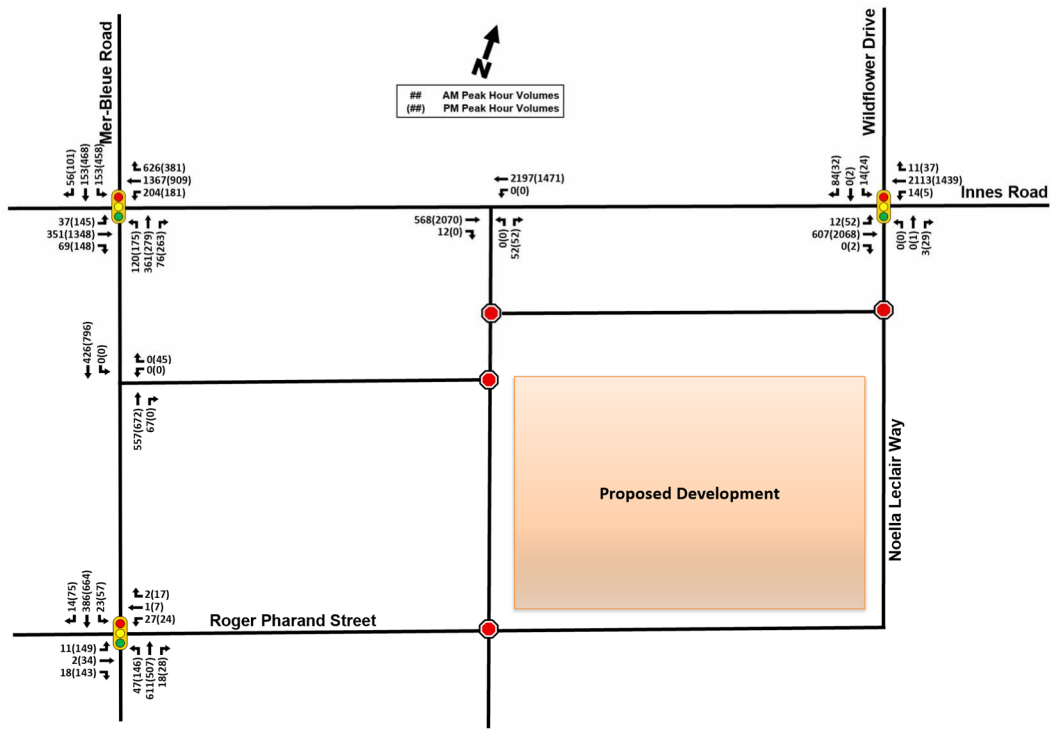
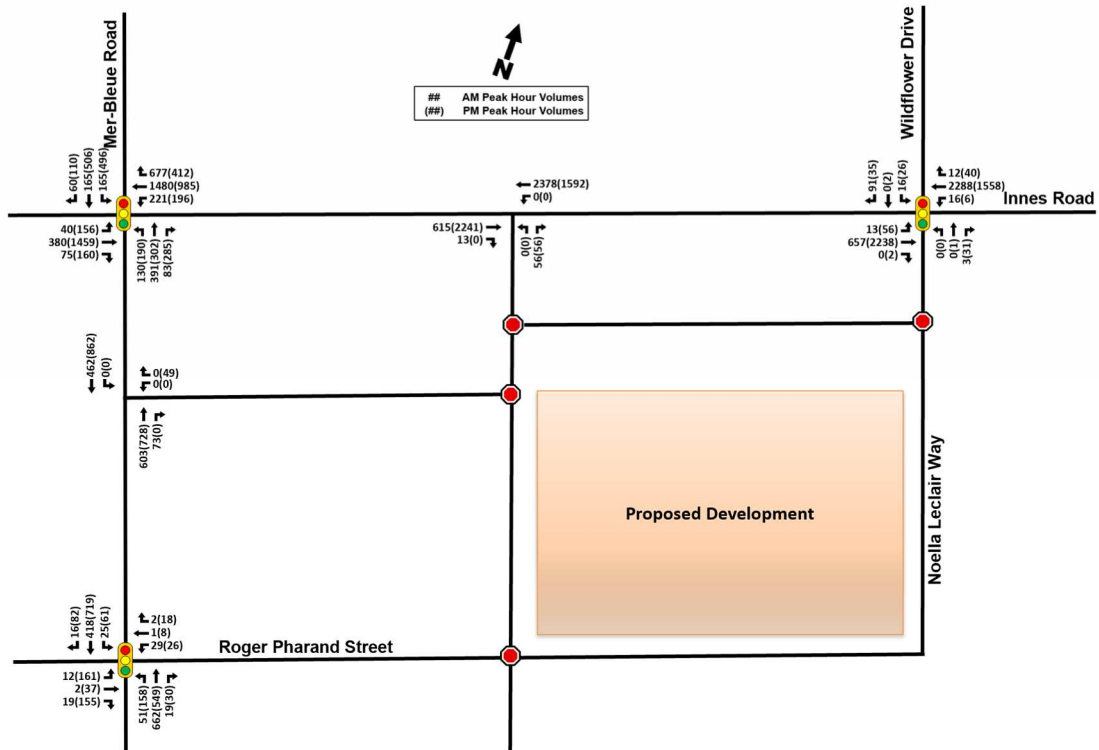


Figure 11 - 2031 Future Background Volumes



3.3 DEVELOPMENT DESIGN

3.3.1 Design for Sustainable Modes

The proposed development at 2025 Mer Bleue Road incorporates multiple design elements that support walking, cycling, and transit, promoting sustainable modes of transportation. The site is strategically designed to integrate with the surrounding active transportation and transit networks, ensuring accessibility and connectivity for all users.

Walking

The site includes hardscaped pathways that connect the main entrances of the building to the adjacent sidewalks and parking areas, including the sidewalks along both Mer Bleue Road and Innes Road. These pathways are well-lit and accessible, ensuring safe and convenient access for pedestrians. Additional landscaping and seating areas are incorporated near the building entrance to enhance the pedestrian experience.

Cycling

The development supports cycling by providing 16 bicycle parking spaces in line with the City of Ottawa's requirements. Bicycle parking is strategically located near the building entrance for convenience. The surrounding cycling infrastructure includes dedicated cycling lanes along both Mer Bleue Road and Innes Road. These facilities encourage the use of bicycles as a viable mode of transportation for both customers and staff.

Transit

The site is well-served by OC Transpo bus routes, with nearby stops on Mer Bleue Road and Innes Road providing connections to key destinations across Ottawa. The walking distance to these transit stops is less than 400 meters, ensuring easy access for transit users. Improvements to pedestrian pathways on the site further enhance connectivity to these stops, supporting a multimodal transportation approach.

Transportation Demand Management (TDM)

To promote sustainable travel choices, the development incorporates elements from the City of Ottawa's Transportation Demand Management (TDM) checklist. These include:

- Convenient bicycle parking facilities for short-term use.
- Direct pedestrian connections to transit stops and adjacent sidewalks.
- A compact site design that minimizes travel distances for active transportation users.

The proposed development at 2025 Mer Bleue Road integrates walking, cycling, and transit-supportive design features, aligning with the City of Ottawa's sustainable transportation goals. These measures contribute to reducing the reliance on private vehicles while providing safe, efficient, and accessible transportation options for all users.

Recommended designs to be included to enhance sustainable travel choices include:

- Provision of **direct access to major transit stops** within 600 meters. Provide crosswalk in the northwest corner of the development to connect sidewalks to the adjacent building.



- Smooth and well-drained walking surfaces differentiated from vehicular areas using contrasting materials.
- Inclusion of landscaping, benches, and wayfinding signage to enhance pedestrian and cyclist experience.
- Bicycle parking in visible, well-lit, and weather-protected areas.
- Signed and prioritized parking spaces for carpools, strategically located.

The completed Transportation Demand Management (TDM) – Supportive Development Design and Infrastructure Checklist is included in **Appendix C**.

3.3.2 Circulation and Access

The proposed development at 2025 Mer Bleue Road ensures efficient circulation and access for all users, including general traffic, delivery vehicles, garbage collection, and emergency services. The site design incorporates multiple entry points and designated routes to facilitate smooth traffic flow while maintaining safety and functionality.

General Traffic

The plaza features four existing general traffic entrances and will add one private entrance from Noella Leclair Way, providing direct access to the site for customers and staff. These entry points ensure efficient circulation within the parking lot and minimize congestion during peak hours. The clear separation of vehicle movements supports a safe and functional environment for all users.

Truck Loading and Deliveries

Truck loading and deliveries will be facilitated through a dedicated truck approach from Roger Pharand Street. This entrance is designed to accommodate delivery vehicles, ensuring direct access to the designated loading area at the rear of the building. The provision of two loading spaces meets operational requirements and aligns with zoning by-law standards. The separation of truck and general traffic routes enhances safety and operational efficiency.

Emergency Access and Fire Routes

The site design allows for fire routes through seven entry points across the plaza. These routes provide emergency vehicle access from Noella Leclair Way, Roger Pharand Street, and other site entrances, ensuring compliance with safety regulations. The designated fire routes allow for rapid response times and comprehensive site coverage in case of emergencies.

Garbage Collection

Garbage collection will be managed at the rear of the building, where designated areas provide space for waste storage and pickup. This area is directly accessible via the truck approach from Roger Pharand Street, ensuring efficient waste removal operations without interfering with general traffic or customer access.

The circulation and access strategy for 2025 Mer Bleue Road integrates multiple entry points, dedicated loading facilities, and clear separation of vehicle types to support efficient and safe site operations. These features enhance functionality while meeting the needs of customers, delivery services, and emergency responders.



3.4 PARKING

The proposed development at 2025 Mer Bleue Road is located within Area C of Schedule 1A of the City of Ottawa Zoning By-law 2008-250. Based on the zoning designation for retail food store use, the minimum parking requirement is 3.4 spaces per 100 m² of Gross Floor Area (GFA). With a total GFA of 3,598 m², the by-law requires a minimum of 123 parking spaces.

The development exceeds this requirement by providing 261 parking spaces, which equates to approximately 5.34 spaces per 100 m² of GFA. This additional parking ensures ample availability for customers and staff, accommodating peak demand.

The proposed development also includes 2 loading spaces, exceeding the by-law's minimum requirement of 1 loading space. This ensures sufficient capacity to manage delivery and operational needs effectively.

To support active transportation, the by-law requires 1 bicycle parking space per 250 m² of GFA, resulting in a requirement of 16 spaces. The site design includes these facilities, with 60 bicycle parking spaces provided, promoting sustainable transportation options.

In compliance with the Accessibility for Ontarians with Disabilities Act (AODA), the proposed parking layout includes 6 barrier-free parking spaces, to ensure accessibility for all users. These spaces are designed according to AODA standards and are strategically located near the building entrance for convenience.

The proposed parking provisions, including the surplus vehicle parking and loading spaces, exceed by-law requirements, supporting the operational and accessibility needs of the development while encouraging sustainable transportation options.

3.5 BOUNDARY STREETS

3.5.1 Mobility

The City of Ottawa evaluates transportation performance using the Multi-Modal Level of Service (MMLOS) framework, which assesses the Level of Service (LOS) for all modes of transportation, including pedestrians (PLOS), cyclists (BLOS), transit (TLOS), and vehicles (AutoLOS). These MMLOS guidelines provide direction on balancing trade-offs across different transportation modes, tailored to the specific location and land use context of the study site.

The site at 2025 Mer Bleue Road is located within an urban area and designated as part of the City's evolving transit and active transportation network. The Official Plan emphasizes the promotion of sustainable, multi-modal corridors, setting high MMLOS targets for pedestrians and cyclists while ensuring reasonable accommodation for vehicular and transit traffic. The MMLOS targets for the site are summarized as follows:

- Pedestrian LOS (PLOS): High standards are expected to support safe, accessible, and continuous pedestrian connectivity along adjacent streets and within the site.
- Bicycle LOS (BLOS): High standards reflect the presence of dedicated cycling lanes on Mer Bleue Road and Innes Road, promoting safe and convenient cycling access.



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- Transit LOS (TLOS): Transit services along Mer Bleue Road and Innes Road aim to maintain moderate to high levels of service, ensuring efficient connections to the broader OC Transpo network.
- Auto LOS (AutoLOS): AutoLOS targets aim to balance the accommodation of vehicular traffic with the prioritization of sustainable transportation modes.

The design of the proposed development aligns with the City of Ottawa's MMLOS framework, integrating features that enhance pedestrian and cyclist infrastructure while supporting efficient transit and vehicular circulation. These elements contribute to a sustainable, multi-modal transportation system in line with the City's Official Plan objectives.

Table 10 captures the MMLOS targets for the subject site.

Table 10 - Minimum Desirable MMLOS Targets by Official Plan Designation / Policy

OP Designation / Policy Area	PLOS	BLOS		TLOS		AutoLOS
		Cross-Town	Elsewhere	TP – Isolated Measures*	Mixed Traffic	
Outer Urban or Suburban <i>Mer Bleue Road</i>	C	B	C	C	E	E
Mainstreet Corridor (outside a Hub) <i>Innes Road</i>	B	B	C	C	E	E

The study area is bound by Innes Road (east-west arterial) and Mer Bleue Road (north-south arterial). Segment MMLOS analysis for future background conditions was conducted for these roads. Detailed MMLOS results are included in **Appendix D** and summarized in **Table 11** below.

Table 11 - Segment MMLOS for Boundary Streets, Future Background

	PLOS	BLOS		TLOS		Public Realm LOS
		Cross-Town	Elsewhere	TP – Isolated Measures	Mixed Traffic	
Target	B	B	C	C	E	E
Innes, Mer Bleue to Noella Leclair	B (North Side) A (South Side)	D			C	C
Target	C	B	C	C	E	E
Mer Bleue, Innes to Roger Pharand	B (west side) A (east side)		D		C	C

The segment MMLOS results indicate that PLOS, TLOS, and Public Realm LOS targets are met for both Innes Road and Mer Bleue Road. However, BLOS targets are not met due to insufficient cycling infrastructure along these corridors. There are opportunities to better align these streets with the City of Ottawa's complete streets policy and the Transportation Master Plan (TMP) goals.



Innes Road, Mer Bleue to Noella Leclair

High traffic volumes, limited separation between vehicle lanes and sidewalks, and a lack of protected cycling infrastructure contribute to the BLOS failing to meet targets for this segment. While the PLOS and TLOS meet the required thresholds, improvements are necessary to enhance multi-modal connectivity and safety.

- **PLOS Performance:** The north side achieves a PLOS "B," offering a comfortable pedestrian environment, while the south side achieves an "A," representing a very comfortable pedestrian experience. This performance is attributed to the provision of sidewalks and consistent pedestrian facilities.
- **Cycling Infrastructure:** The BLOS rating of D highlights the need for improved cycling facilities. Cycle tracks, physically separated from vehicular traffic, would greatly enhance safety and comfort for cyclists and align this segment with its TMP designation as a Cross-Town Bikeway.
- **TLOS and Public Realm LOS:** TLOS meets the minimum desirable "C" rating, suggesting moderate transit service accessibility. Public Realm LOS remains at "C," which indicates adequate, though not exceptional, space and amenities for active transportation.

Mer Bleue Road (Innes to Roger Pharand)

- **PLOS Performance:** Both sides of Mer Bleue Road achieve desirable scores, with the west side scoring "B" and the east side achieving "A." These scores are reflective of continuous sidewalks and other pedestrian-friendly infrastructure.
- **BLOS Performance:** The segment scores "D" for cycling, primarily due to the lack of designated cycling facilities and high traffic volumes.
- **TLOS and Public Realm LOS:** TLOS meets the minimum desirable "C," ensuring acceptable transit connectivity, while Public Realm LOS achieves a "C," providing basic amenities and separation from traffic for active modes.

Recommendations for Boundary Streets

- **Innes Road Improvements:** To enhance BLOS performance, it is recommended that cycle tracks or buffered bike lanes be added along Innes Road, in alignment with the TMP designation of the corridor as a Cross-Town Bikeway. This addition would also contribute to improved Public Realm LOS by providing a greater sense of safety and comfort for cyclists.
- **Mer Bleue Road Improvements:** Similarly, to meet BLOS targets, physically separated cycling facilities should be introduced along Mer Bleue Road. These facilities would align with the TMP's emphasis on sustainable and active modes of transportation.
- **Transit Enhancements:** Provide improved transit stops with shelters, seating, and accessible boarding areas to further enhance TLOS performance. Integrate transit priority measures where feasible, such as queue jump lanes or dedicated bus lanes.



3.5.2 Road Safety

As discussed in Section 2.1.2.7, there were no concerning trends in historical collision data. The road safety assessment for the study area was conducted using collision data from the City of Ottawa and considered existing conditions along Innes Road (Mer Bleue to Noella Leclair) and Mer Bleue Road (Innes to Roger Pharand). The analysis identified key trends and areas for potential safety improvements to enhance the overall functionality and safety of the road network. Key findings include:

Collision data for the past five years indicates a total of 201 reported collisions across the study area intersections. The majority of these incidents were rear-end collisions, often associated with high traffic volumes, queuing at intersections, and the relatively high posted speed limits on Innes Road and Mer Bleue Road.

Intersection of Innes Road and Mer Bleue Road:

- This location experienced the highest number of collisions in the study area, accounting for 77% of all reported incidents.
- Rear-end collisions were the most common type, attributed to queuing and high-speed traffic during peak periods.
- The lack of adequate turning lanes and long crossing distances for pedestrians further contribute to operational challenges and safety concerns.

Intersection of Innes Road and Noella Leclair Way:

- Representing 17% of reported collisions, this intersection primarily experienced rear-end and sideswipe collisions.

Intersection of Mer Bleue Road and Roger Pharand Street:

- This intersection accounted for 6% of reported collisions.
- Angle and turning collisions were prevalent, linked to limited visibility and high turning movements during peak hours.

3.6 TRANSPORTATION DEMAND MANAGEMENT (TDM)

3.6.1 Context for TDM

The surrounding area is designated within Area C of Schedule 1A under the City of Ottawa's Zoning By-Law, and the applicable transportation demand management (TDM) measures aim to encourage active and sustainable modes of transportation.

As outlined in the City's Transportation Master Plan (TMP), the site falls within an Outer Urban/Suburban zone. The TMP sets mode share targets for active and public transportation in this area, emphasizing the reduction of auto



mode share. The planned Blair Station to Mer Bleue Road Bus Rapid Transit (BRT) corridor improvements are expected to enhance transit accessibility and increase the transit mode share over time.

The development proposes 261 parking spaces and two loading spaces, aligning with the parking requirements under the zoning by-law. Additionally, barrier-free parking and bicycle parking are included in the site plan to support active and accessible transportation options.

3.6.2 Need and Opportunity

The proposed development presents a unique opportunity to support the City of Ottawa's transportation goals, particularly for active and sustainable modes of transportation. Key factors include:

- The site's proximity to the planned Mer Bleue BRT corridor, which will enhance transit service and reduce reliance on private vehicles.
- Cycling infrastructure improvements along Innes Road and Mer Bleue Road, which are identified as critical links in the Cross-Town Bikeway network under the TMP.
- Provision of on-site sidewalk facilities to support connections between the development, nearby transit stops, and adjacent areas.

3.6.3 TDM Program

The Transportation Demand Management (TDM) – **Supportive Development Design and Infrastructure Checklist** has been reviewed, and the following measures are recommended to support active and sustainable transportation options at the proposed development:

TDM Program Management

- **Travel Surveys and Monitoring:** Periodic travel surveys or monitoring programs should be implemented to gather commute data and identify barriers to sustainable transportation choices.
- **Awareness Campaigns:** Workplace campaigns or programs should promote sustainable commuting options such as transit use, cycling, and carpooling through advertisements, events, and incentive programs.

On-Site Amenities

- **Errand Reduction:** The retail nature of the development provides opportunities to reduce the need for separate trips by offering goods and services on-site. Employees and customers can complete errands without additional vehicle trips.
- **Bicycle Facilities:** Provision of secure, sheltered, and well-lit bicycle parking for both employees and customers to encourage cycling as a primary mode of transport.

Transit Amenities

- **Transit Information Displays:** Install digital screens in public areas such as the lobby to display real-time transit updates, route maps, and schedules, making transit more convenient and accessible for employees and customers.



Pedestrian and Cyclist Infrastructure

- **Enhanced Walkability:** Design safe, accessible, and well-lit pedestrian pathways connecting building entrances to public sidewalks, transit stops, and parking areas.

Delivery and Logistics

- **Efficient Loading Areas:** Provide clearly marked, designated spaces for deliveries and trucks to minimize conflicts with pedestrians and cyclists and reduce idling times.

By implementing these TDM measures, the proposed development will support the City of Ottawa's objectives for sustainable urban growth, enhance the commuting experience for employees and customers, and reduce dependency on private vehicle use. These recommendations align with the City's **Transportation Master Plan (TMP)** and encourage a shift toward more sustainable modes of transportation. The completed TDM Checklists are included in **Appendix C**.

3.7 TRANSIT

3.7.1 Transit Priority

Timelines for the planned transit priority measures by the City of Ottawa which include transit signal priority, queue jump lanes, and the ultimate establishment of a BRT, are not confirmed. Such transit priority measures are supported to accommodate the anticipated growth on study area corridors, and projected network traffic volumes.

3.8 INTERSECTION DESIGN

3.8.1 Intersection Controls

The existing intersection control will be maintained for all study area intersections for both 2025 existing conditions and future conditions assessments. Key assumptions for the study area include:

1. The existing signalized intersections at **Innes Road and Mer Bleue Road** and **Innes Road and Noella Leclair Way** will remain signalized.
2. No major intersection control upgrades are assumed within the study area.

3.8.2 Intersection MMLOS

Intersection Multi-Modal Level of Service (MMLOS) analysis was conducted to evaluate the performance of intersections in the study area under existing, future background, and future total conditions. The analysis assessed the comfort, safety, and operational efficiency for all travel modes, including pedestrians (PLOS), cyclists (BLOS), transit users (TLOS), and drivers (AutoLOS). The results were evaluated against the MMLOS targets defined in the City of Ottawa's 2024 MMLOS Guideline Update, which reflects the latest standards for multi-modal transportation assessment. Detailed MMLOS results are provided in **Appendix D** and summarized below.

Intersection MMLOS for Existing conditions are shown in **Table 12**, with a summary of results provided below.



Table 12 - Intersection MMLOS, Existing

	PLOS	BLOS	TLOS	AutoLOS
Innes Road, Mer Bleue to Noella Leclair				
Target	C	B	D	E
Innes Road & Mer Bleue Road	E	F	C	D
Innes Road & Noella Leclair Way	C	F	C	E
Mer Bleue, Innes to Roger Pharand				
Target	C	C	D	E
Mer Bleue, Road & Roger Pharand Street	C	F	B	A

- **Innes Road & Mer Bleue Road:** PLOS (E) and BLOS (F) do not meet their respective targets (C and B) due to long crossing distances, the absence of protected cycling infrastructure, and high traffic volumes. TLOS (C) and AutoLOS (D) both meet their respective targets, indicating acceptable operations for transit users and general vehicular traffic.
- **Innes Road & Noella Leclair Way:** PLOS (C) meets the target, while BLOS (F) falls short, primarily due to the lack of protected cycling facilities. AutoLOS (E) is at the target, indicating operations are within acceptable levels under current conditions. TLOS (C) also meets the target.
- **Mer Bleue Road & Roger Pharand Street:** PLOS (C) meets the target (C), while BLOS (F) does not meet the target (C) due to insufficient cycling infrastructure. However, TLOS and AutoLOS operate within acceptable levels.

Intersection MMLOS for Future Background conditions are summarized in

Table 13. There is minimal variation of MMLOS results from Existing to Future Background conditions as there are no major changes to these intersections from known, committed projects.

Table 13 - Intersection MMLOS, 2031 Future Background

	PLOS	BLOS	TLOS	AutoLOS
Innes Road, Mer Bleue to Noella Leclair				
Target	C	B	D	E
Innes Road & Mer Bleue Road	E	F	D	D
Innes Road & Noella Leclair Way	C	F	D	E
Mer Bleue, Innes to Roger Pharand				
Target	C	C	D	E
Mer Bleue, Road & Roger Pharand Street	C	F	B	A



Intersection MMLOS for Future Total conditions are summarized in Error! Not a valid bookmark self-reference..

Table 14 - Intersection MMLOS, 2031 Future Total

	PLOS	BLOS	TLOS	AutoLOS
Innes Road, Mer Bleue to Noella Leclair				
Target	C	B	D	E
Innes Road & Mer Bleue Road	E	F	E	D
Innes Road & Noella Leclair Way	C	F	D	E
Mer Bleue, Innes to Roger Pharand				
Target	C	C	D	E
Mer Bleue, Road & Roger Pharand Street	C	F	B	A

- **Innes Road & Mer Bleue Road:** PLOS (E) and BLOS (F) remain below their respective targets (C and B) due to high traffic volumes and the continued absence of dedicated pedestrian and cycling infrastructure. TLOS decreases from C to D in the future background and to E in the future total scenario, not meeting the target the future total scenario. AutoLOS remains at D, which meets the target (E) across both future scenarios.
- **Innes Road & Noella Leclair Way:** PLOS (C) continues to meet the target, while BLOS (F) remains well below the target (B). TLOS decreases from C to D, and AutoLOS remains at target (E).
- **Mer Bleue Road & Roger Pharand Street:** Results remain unchanged, with BLOS not meeting the target MMLOS.

3.8.3 Existing Conditions

The following section summarizes the study area intersection capacity analysis for Existing, Future Background and Future Total Volume scenarios. Detailed results will be provided if required.

Using the intersection capacity analysis software Synchro, study area intersections were assessed in terms of vehicle delay, volume-to-capacity ratio (v/c) and the corresponding Level of Service (LOS). It should be noted that the overall performance of a signalized intersection is calculated as a weighted v/c ratio and assigned a corresponding LOS, with critical movements assigned a LOS based on their respective v/c ratio. Unsignalized intersections are given an LOS based on delay. Full Synchro output reports for all scenarios are available in **Appendix E. Table 15** shows the vehicular level of service that corresponds to each v/c ratio.

Table 15 - Level of Service vs. v/c Ratio

Level of Service	Volume to Capacity Ratio
A	0 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90



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E	0.91 to 1.00
F	> 1.00

Table 16 below summarize the results of the Synchro traffic analysis in Existing conditions for AM and PM peak hours.

Table 16 – Signalized Intersection Operations, Existing Conditions 2025, AM Peak (PM Peak)

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Mer-Bleue Road & Innes Road	EBL	17 (26)	0.28 (0.60)	A (A)	9 (32)
	EBT	21 (79)	0.25 (1.06)	A (F)	38 (#257)
	EBR	1 (5)	0.10 (0.22)	A (A)	0 (13)
	WBL	4 (100)	0.44 (0.97)	A (E)	m8 (m#68)
	WBT	23 (19)	0.96 (0.71)	E (C)	m144 (78)
	WBR	12 (2)	0.75 (0.48)	C (A)	m62 (13)
	NBL	63 (56)	0.55 (0.44)	A (A)	25 (35)
	NBTR	49 (46)	0.69 (0.80)	B (C)	71 (78)
	SBL	71 (143)	0.69 (1.15)	B (F)	#33 (#111)
	SBTR	35 (76)	0.33 (0.95)	A (E)	31 (#116)
	Overall	26 (60)	0.87 (1.01)	D (F)	-
Noella Leclair Way & Innes Road	EBL	13 (9)	0.10 (0.31)	A (A)	m3 (m4)
	EBTR	17 (60)	0.33 (1.08)	A (F)	50 (m#298)
	WBL	7 (7)	0.04 (0.04)	A (A)	3 (2)
	WBTR	107 (23)	1.17 (0.78)	F (C)	#380 (180)
	NBL	0 (0)	0.00 (0.00)	A (A)	0 (0)
	NBTR	0 (16)	0.01 (0.10)	A (A)	0 (9)
	SBL	39 (45)	0.06 (0.10)	A (A)	9 (14)
	SBTR	12 (16)	0.23 (0.11)	A (A)	15 (10)
	Overall	83 (43)	1.13 (1.06)	F (F)	-
Mer-Bleue Road & Roger Pharand Street	EBL	18 (22)	0.02 (0.31)	A (A)	5 (34)
	EBTR	9 (7)	0.03 (0.27)	A (A)	5 (18)
	WBL	19 (19)	0.06 (0.06)	A (A)	9 (8)
	WBTR	14 (11)	0.00 (0.04)	A (A)	2 (6)
	NBL	15 (28)	0.12 (0.57)	A (A)	11 (41)
	NBT	17 (16)	0.41 (0.34)	A (A)	51 (41)
	NBR	1 (3)	0.03 (0.04)	A (A)	1 (3)
	SBL	14 (16)	0.08 (0.17)	A (A)	7 (14)
	SBT	15 (17)	0.26 (0.45)	A (A)	31 (56)
	SBR	1 (4)	0.02 (0.11)	A (A)	1 (7)
	Overall	15 (16)	0.37 (0.44)	A (A)	-

1. Mer Bleue Road & Innes Road:

The intersection operates over capacity during the PM peak period, with critical movements such as the eastbound through (EBT) and southbound left (SBL) experiencing LOS F, extended delays, and long queues. Increasing the overall cycle length and allocating additional green time to EBT and SBL movements would help reduce v/c ratios and improve overall intersection LOS. However, given the volume of commuter traffic, particularly during the PM peak, significant improvement may remain limited without a broader modal shift. The City's Transit Priority Corridor, which runs along Innes Road toward Jeanne d'Arc Boulevard, is expected to enhance transit service in the area and encourage a shift from single-occupancy vehicles to buses, ultimately relieving pressure on this intersection.



2. Noella Leclair Way & Innes Road:

This intersection experiences critical operational challenges during both AM and PM peak periods, with an overall v/c ratio of 1.13 (AM) and 1.06 (PM), resulting in LOS F. The westbound through/right (WBTR) movement is particularly congested in the AM peak, with a v/c ratio of 1.17 and LOS F, and a 95th percentile queue of 380 metres. The eastbound through/right (EBTR) movement becomes problematic in the PM peak, operating at a v/c ratio of 1.08 and LOS F, with queue lengths nearing 298 metres.

To alleviate congestion in the AM peak, it is recommended to reallocate green time toward the WBTR movement. In the PM peak, increasing the overall cycle length and allocating more green time to EBTR would provide some relief and reduce queues. However, given the high traffic flow along Innes Road, signal optimization alone is unlikely to fully address performance issues. The long-term solution lies in facilitating modal shift through the planned Transit Priority Corridor along Innes Road, which will enhance transit frequency and reliability, encouraging a shift from private vehicle use to public transit.

3. Mer Bleue Road & Roger Pharand Street:

The intersection operates efficiently, with all movements achieving acceptable delays and v/c ratios. No immediate improvements are required.

3.8.4 Future Background

Table 17 below summarize the results of the Synchro traffic analysis in Future Background 2026 conditions.

Table 17 – Signalized Intersection Operations, Future Background 2026, AM Peak (PM Peak)

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Mer-Bleue Road & Innes Road	EBL	17 (23)	0.26 (0.52)	A (A)	9 (29)
	EBT	20 (59)	0.23 (0.98)	A (E)	35 (#228)
	EBR	1 (5)	0.09 (0.21)	A (A)	0 (13)
	WBL	4 (89)	0.40 (0.91)	A (E)	m8 (m#68)
	WBT	20 (17)	0.90 (0.66)	D (B)	m143 (52)
	WBR	10 (2)	0.69 (0.45)	B (A)	m59 (5)
	NBL	62 (56)	0.51 (0.41)	A (A)	24 (33)
	NBTR	47 (42)	0.64 (0.74)	B (C)	65 (70)
	SBL	68 (118)	0.65 (1.07)	B (F)	#30 (#100)
	SBTR	34 (67)	0.31 (0.88)	A (D)	29 (#104)
	Overall	24 (49)	0.81 (0.94)	D (E)	-
Noella Leclair Way & Innes Road	EBL	13 (8)	0.09 (0.25)	A (A)	m3 (m4)
	EBTR	16 (32)	0.31 (1.01)	A (F)	46 (m#162)
	WBL	7 (7)	0.03 (0.03)	A (A)	3 (2)
	WBTR	73 (21)	1.08 (0.72)	F (C)	#338 (157)



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Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
	NBL	0 (0)	0.00 (0.00)	()	0 (0)
	NBTR	0 (16)	0.01 (0.09)	A (A)	0 (9)
	SBL	39 (45)	0.05 (0.09)	A (A)	8 (13)
	SBTR	10 (16)	0.21 (0.10)	A (A)	13 (9)
	Overall	58 (27)	1.04 (0.99)	F (E)	-
Mer-Bleue Road & Roger Pharand Street	EBL	18 (22)	0.02 (0.29)	A (A)	4 (32)
	EBTR	9 (7)	0.03 (0.25)	A (A)	5 (16)
	WBL	19 (19)	0.05 (0.05)	A (A)	8 (8)
	WBTR	14 (11)	0.00 (0.04)	A (A)	2 (6)
	NBL	15 (24)	0.11 (0.49)	A (A)	10 (35)
	NBT	17 (16)	0.38 (0.32)	A (A)	47 (38)
	NBR	1 (3)	0.02 (0.04)	A (A)	1 (3)
	SBL	14 (15)	0.07 (0.15)	A (A)	6 (13)
	SBT	15 (17)	0.24 (0.41)	A (A)	29 (51)
	SBR	1 (4)	0.02 (0.10)	A (A)	0 (7)
	Overall	15 (15)	0.35 (0.39)	A (A)	-

The intersection operational results between the 2025 Existing Conditions and 2026 Future Background scenarios show marginal improvements in v/c ratios and delays for several movements, which may appear counterintuitive given the expected increase in traffic volumes. However, the improvements can be attributed to a change in the Peak Hour Factor (PHF) applied in the modeling. In line with City of Ottawa standards, the Existing Conditions analysis used a PHF of 0.90, while the Future Background analysis applied a PHF of 1.00. This adjustment reflects a more uniform traffic arrival pattern in the future scenario, leading to slightly improved capacity utilization under the same geometric and control conditions.

1. Mer Bleue Road & Innes Road:

- The EBT movement, which previously operated at v/c = 1.06 (LOS F) in the 2025 PM peak, improves to v/c = 0.98 (LOS E) in 2026.
- The WBL movement improves from v/c = 0.97 (LOS E) to v/c = 0.91 (LOS E), though still close to capacity.
- The SBTR movement also sees a reduction in v/c from 0.95 to 0.88, with LOS improving from E to D.
- Overall intersection delay remains within the LOS D/E range, and the PM peak v/c ratio drops from 1.01 to 0.94, indicating a slight relief in peak-hour pressure.

2. Noella Leclair Way & Innes Road:

- The WBTR movement shows a notable improvement in v/c ratio from 1.17 (LOS F) to 1.08 (LOS F) in the AM peak. Despite still exceeding capacity, the queue length decreases slightly.
- Similarly, the EBTR movement sees v/c drop from 1.08 to 1.01, with delay also reducing.
- The overall intersection v/c ratio improves from 1.13 (LOS F) to 1.04 (LOS F) in the AM, and from 1.06 to 0.99 in the PM, moving just within acceptable operational bounds.

3. Mer Bleue Road & Roger Pharand Street:



- All movements continue to operate well within capacity, with v/c ratios below 0.50 and LOS 'A' maintained across both time periods.
- The only minor variation is in queue lengths and slight improvements in delay due to smoother arrival assumptions from the PHF.

3.8.5 Future Total

Table 18 below summarize the results of the Synchro traffic analysis in Future Total 2026 conditions. Projected Future Total 2026 and 2031 traffic volumes are shown at the end of this section in **Figure 12** and **Figure 13**.

Table 18 – Signalized Intersection Operations, Future Total 2026, AM Peak (PM Peak)

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Mer-Bleue Road & Innes Road	EBL	17 (23)	0.26 (0.52)	A (A)	9 (29)
	EBT	20 (66)	0.24 (1.01)	A (F)	37 (#238)
	EBR	1 (5)	0.10 (0.23)	A (A)	0 (13)
	WBL	4 (89)	0.40 (0.91)	A (E)	m9 (m#68)
	WBT	20 (18)	0.90 (0.66)	D (B)	m143 (57)
	WBR	10 (2)	0.70 (0.45)	B (A)	m60 (4)
	NBL	63 (56)	0.53 (0.45)	A (A)	25 (36)
	NBTR	48 (51)	0.67 (0.83)	B (D)	68 (#88)
	SBL	68 (118)	0.65 (1.07)	B (F)	#30 (#100)
	SBTR	37 (80)	0.34 (0.97)	A (E)	33 (#120)
	Overall	25 (54)	0.82 (0.97)	D (E)	-
Noella Leclair Way & Innes Road	EBL	13 (9)	0.09 (0.25)	A (A)	m3 (m7)
	EBTR	16 (51)	0.32 (1.02)	A (F)	48 (m#336)
	WBL	7 (12)	0.06 (0.29)	A (A)	5 (7)
	WBTR	73 (21)	1.08 (0.72)	F (C)	#338 (157)
	NBL	39 (46)	0.04 (0.14)	A (A)	7 (18)
	NBTR	0 (13)	0.02 (0.15)	A (A)	0 (11)
	SBL	39 (45)	0.05 (0.09)	A (A)	8 (13)
	SBTR	10 (16)	0.21 (0.10)	A (A)	13 (9)
	Overall	57 (37)	1.04 (0.98)	F (E)	-
Mer-Bleue Road & Roger Pharand Street	EBL	18 (22)	0.02 (0.31)	A (A)	4 (32)
	EBTR	9 (7)	0.03 (0.25)	A (A)	5 (16)
	WBL	19 (19)	0.06 (0.10)	A (A)	9 (12)
	WBTR	9 (6)	0.04 (0.14)	A (A)	5 (10)
	NBL	15 (24)	0.11 (0.49)	A (A)	10 (35)
	NBT	17 (16)	0.38 (0.32)	A (A)	47 (38)
	NBR	2 (5)	0.04 (0.06)	A (A)	2 (6)
	SBL	16 (19)	0.16 (0.34)	A (A)	12 (27)
	SBT	15 (17)	0.24 (0.41)	A (A)	29 (51)
	SBR	1 (4)	0.02 (0.10)	A (A)	0 (7)
	Overall	15 (15)	0.34 (0.38)	A (A)	-

The operational performance of study area intersections under 2026 Future Total conditions (with development traffic) was compared directly to the 2026 Future Background scenario (without development traffic) to assess the impact of the proposed retail development. Based on the Synchro results, the development introduces minor increases in v/c ratios and queue lengths at some intersections, but no new failing movements are triggered, and the overall LOS remains largely unchanged. The following key comparisons highlight the level of impact:



1. Mer Bleue Road & Innes Road

- Overall Intersection: v/c increases slightly from 0.81 to 0.82 (AM) and from 0.94 to 0.97 (PM), while LOS remains D (AM) and E (PM).
- EBT (PM peak): v/c rises from 0.98 to 1.01 (LOS F) but this movement was already approaching capacity in the Future Background. The marginal increase indicates the development has a measurable but not transformative effect.
- SBTR (PM peak): v/c increases from 0.88 to 0.97, increasing from LOS D to LOS E, which may indicate some degradation, but remains within the acceptable level of performance for the City.

2. Noella Leclair Way & Innes Road

- Overall Intersection: v/c remains stable at 1.04 (AM) and slightly decreases from 0.99 to 0.98 (PM), while LOS remains F (AM) and E (PM).
- EBTR (AM): v/c rises marginally from 1.01 to 1.02, retaining LOS F.
- WBTR (AM): No change in v/c (1.08); delay and queue length remain unchanged.
- The intersection remains capacity constrained, but development traffic does not significantly worsen operations. Most movements operate as they did under background conditions, and no new mitigation appears warranted solely due to site-generated traffic.

3. Mer Bleue Road & Roger Pharand Street

- Overall Intersection: v/c slightly decreases from 0.35 to 0.34 (AM) and from 0.39 to 0.38 (PM). LOS remains A in all cases.
- All critical movements (e.g., NBT, SBT) show no meaningful increase in v/c or delay.
- This intersection is not impacted by the development and continues to operate at a high level of service.

Across all study intersections, no significant degradation in LOS or v/c ratios is observed when comparing Future Background (2026) to Future Total (2026) conditions. Although some movements, such as EBT at Mer Bleue & Innes Road, operate near or just above capacity, these were already constrained in the background scenario. Therefore, no additional intersection improvements are triggered as a direct result of the proposed development. The existing and planned transportation infrastructure is deemed adequate to support the anticipated site traffic under 2026 conditions.

Table 19 below summarize the results of the Synchro traffic analysis in Future Total 2031 conditions.

Table 19 – Signalized Intersection Operations, Future Total 2031, AM Peak (PM Peak)

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Mer-Bleue Road & Innes Road	EBL	17 (27)	0.28 (0.61)	A (B)	9 (32)
	EBT	21 (90)	0.26 (1.09)	A (F)	40 (#269)
	EBR	1 (5)	0.11 (0.25)	A (A)	1 (14)
	WBL	4 (102)	0.45 (0.98)	A (E)	m9 (m#68)
	WBT	23 (20)	0.97 (0.72)	E (C)	m144 (84)



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Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
	WBR	13 (2)	0.76 (0.48)	C (A)	m62 (m13)
	NBL	64 (57)	0.57 (0.48)	A (A)	26 (38)
	NBTR	50 (57)	0.72 (0.90)	C (D)	74 (#101)
	SBL	71 (145)	0.70 (1.16)	B (F)	#34 (#111)
	SBTR	37 (97)	0.36 (1.04)	A (F)	35 (#134)
	Overall	27 (67)	0.88 (1.05)	D (F)	-
Noella Leclair Way & Innes Road	EBL	13 (9)	0.10 (0.31)	A (A)	m3 (m4)
	EBTR	17 (70)	0.34 (1.11)	A (F)	52 (m#298)
	WBL	7 (13)	0.07 (0.29)	A (A)	5 (7)
	WBTR	110 (23)	1.17 (0.78)	F (C)	#384 (182)
	NBL	39 (46)	0.04 (0.14)	A (A)	7 (18)
	NBTR	0 (13)	0.02 (0.15)	A (A)	0 (11)
	SBL	39 (45)	0.06 (0.10)	A (A)	9 (14)
	SBTR	12 (16)	0.23 (0.11)	A (A)	15 (10)
	Overall	85 (48)	1.12 (1.06)	F (F)	-
Mer-Bleue Road & Roger Pharand Street	EBL	18 (23)	0.02 (0.34)	A (A)	5 (35)
	EBTR	9 (7)	0.03 (0.27)	A (A)	5 (18)
	WBL	19 (19)	0.07 (0.10)	A (A)	10 (12)
	WBTR	9 (6)	0.04 (0.15)	A (A)	5 (10)
	NBL	15 (28)	0.12 (0.58)	A (A)	11 (42)
	NBT	17 (16)	0.41 (0.34)	A (A)	51 (42)
	NBR	2 (5)	0.04 (0.07)	A (A)	2 (6)
	SBL	16 (19)	0.18 (0.37)	A (A)	12 (28)
	SBT	15 (17)	0.26 (0.45)	A (A)	31 (56)
	SBR	1 (4)	0.02 (0.11)	A (A)	1 (7)
	Overall	15 (16)	0.37 (0.43)	A (A)	-

1. Mer Bleue Road & Innes Road

- Overall Intersection: v/c increases from 0.82 to 0.88 (AM) and 0.97 to 1.05 (PM), with LOS degrading from E to F (PM).
- EBT (PM): v/c increases from 1.01 to 1.09, maintaining LOS F, indicating this movement continues to be a critical constraint.
- SBTR (PM): v/c grows from 0.97 to 1.04, with LOS falling from E to F—now exceeding capacity.
- SBL (PM): v/c increases from 1.07 to 1.16, with LOS F, and longer queues.
- NBTR (PM): Slight v/c increase from 0.83 to 0.90, LOS remains D.
- Most movements that were near or over capacity in 2026 have worsened, with multiple movements now exceeding v/c = 1.0 in 2031.
- Long-term congestion issues become more prominent at this intersection by 2031. Targeted improvements—such as extending green phases or implementing transit signal priority as part of the Transit Priority Corridor—may be necessary to prevent recurring failures.

2. Noella Leclair Way & Innes Road



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- Overall Intersection: v/c increases from 1.04 to 1.12 (AM) and from 0.98 to 1.06 (PM), with LOS remaining F (AM) and degrading from E to F (PM).
- EBTR (AM): v/c rises from 1.02 to 1.11, maintaining LOS F, with a notable queue increase.
- WBTR (AM): v/c increases from 1.08 to 1.17, LOS remains F, queue rises from 338m to 384m.
- SBL/SBTR and NBTR: Remain well below capacity with LOS A.
- The intersection continues to be heavily impacted by directional commuter demand. The primary issues stem from high-volume east-west movements.
- Operational conditions worsen slightly by 2031, but these are in line with background growth rather than due to development traffic. Signal optimization (e.g., cycle length extension, green reallocation) and modal shift support through the Transit Priority Corridor could be used as a mitigation measure.

3. Mer Bleue Road & Roger Pharand Street

- Overall Intersection: v/c remains nearly unchanged: 0.34 (AM) to 0.37, and 0.38 (PM) to 0.43, with LOS A throughout.
- All movements remain well below v/c = 0.50 with minimal delay or queuing.
- No degradation in performance between 2026 and 2031. No improvements required.

Between 2026 and 2031, the intersections at Mer Bleue & Innes and Noella Leclair & Innes exhibit gradual increases in congestion, primarily driven by area-wide traffic growth. Several movements begin to operate above capacity (v/c > 1.0) by 2031, with LOS degrading to F in key directions. However, these trends are anticipated under normal growth scenarios and not solely a result of site traffic. Mitigation measures might include:

- Signal timing optimization in the short term.
- Supporting modal shift in line with the planned Transit Priority Corridor on Innes and Mer Bleue.
- Monitoring performance beyond 2031 to reassess infrastructure needs if delays worsen.



Figure 12 - 2026 Future Total Traffic Volumes

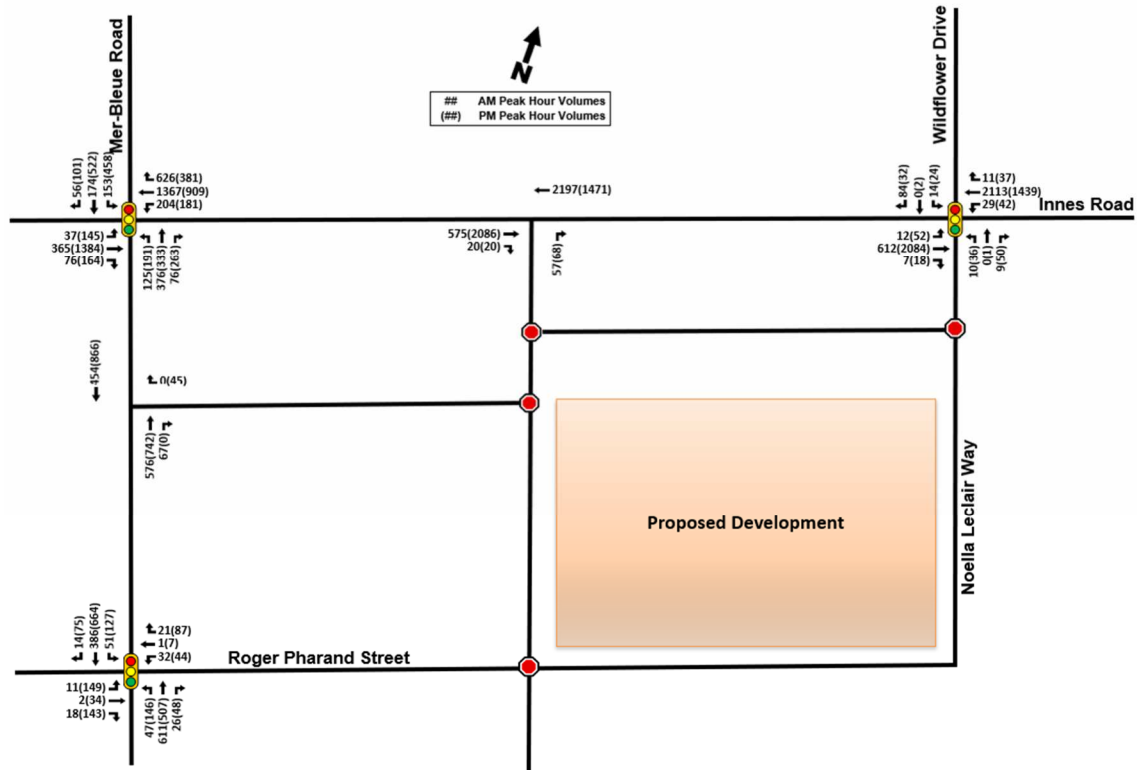
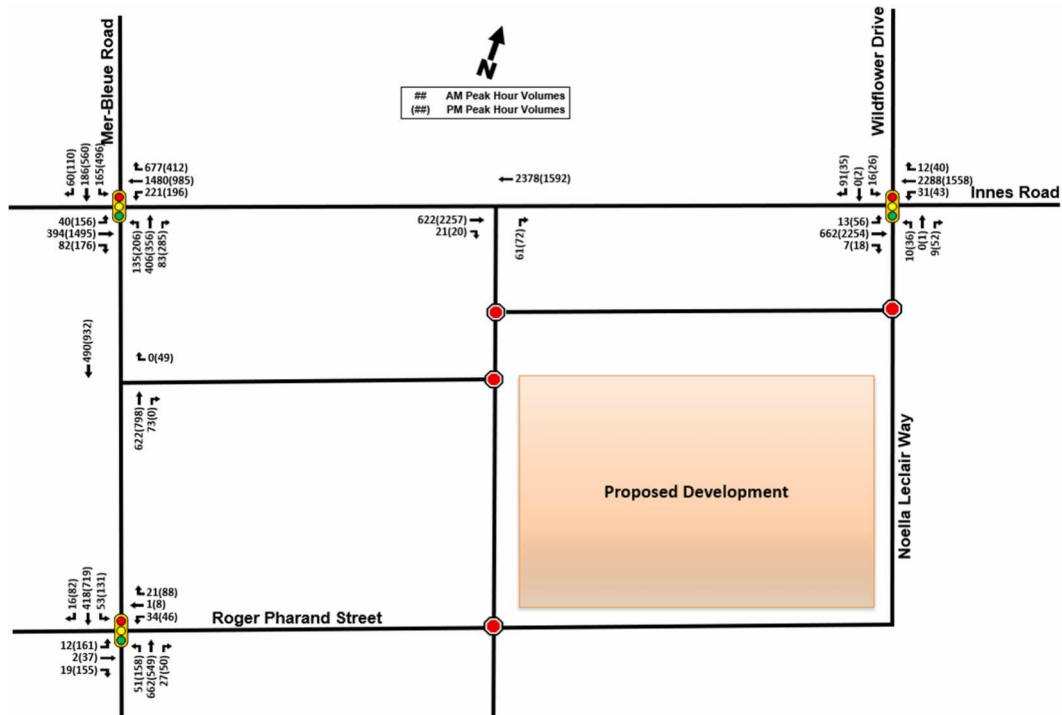


Figure 13 - 2031 Future Total Traffic Volumes



3.9 CONCLUSION AND RECOMMENDATION

The Transportation Impact Assessment (TIA) for the proposed development at 2025 Mer Bleue Road concludes that the surrounding transportation network is generally capable of accommodating the anticipated site-generated traffic within the 2026 and 2031 horizon years. However, specific capacity constraints and multimodal deficiencies have been identified at key intersections, along with opportunities for advancing the City of Ottawa's sustainable transportation objectives. Key Conclusions:

1. Intersection Operations and Capacity

- The intersections at Mer Bleue Road & Innes Road and Noella Leclair Way & Innes Road are forecast to operate over capacity during peak hours, with overall intersection v/c ratios exceeding 1.0 by 2031.
- Critical movements, such as the southbound left and eastbound through at Mer Bleue & Innes and westbound through/right at Noella Leclair & Innes, continue to experience LOS F, long delays, and queuing in both background and total future conditions.
- The proposed development does not introduce any new failing movements, and its impact is limited to minor increases in v/c ratios and queue lengths. These increases are not considered significant enough to trigger major geometric upgrades.

2. Multimodal Level of Service (MMLOS)

- Pedestrian and transit levels of service generally meet or exceed City targets.
- Cycling level of service (BLOS) remains below target across all study area intersections due to the absence of protected or separated infrastructure. This underscores the need for continued investment in active transportation facilities, especially along designated TMP corridors.

3. Transit Infrastructure

- The study area is well-served by multiple OC Transpo routes, with frequent service along Innes and Mer Bleue Roads.
- The future implementation of the Transit Priority Corridor along Innes, while outside the short-term analysis horizon, is essential to support long-term modal shift and reduce auto demand.

4. Safety Assessment

- A review of collision data identified rear-end collisions as the most frequent type, particularly at Mer Bleue & Innes Road, attributed to queuing and signal delay.
- No fatal collisions were reported. Operational enhancements such as improved signal timing and targeted pedestrian infrastructure could help mitigate observed patterns.



5. Transportation Demand Management (TDM)

- The development incorporates several TDM-supportive elements (e.g., bicycle parking, pedestrian pathways connecting to transit stops).
- Further TDM strategies such as transit information displays, incentive programs, and employee commute planning are encouraged to support mode shift and reduce site-related auto dependence.

Recommendations:

1. Intersection Optimization

- Adjust signal timing plans to allocate additional green time to EBT and SBL movements at Mer Bleue & Innes and WBTR/EBTR movements at Noella Leclair & Innes.
- Consider cycle length extensions during peak hours to accommodate dominant movements and reduce intersection v/c ratios.

2. Active Transportation Enhancements

- Introduce protected cycle tracks or buffered bike lanes along Mer Bleue Road and Innes Road, consistent with TMP designations for Cross-Town Bikeways.
- Install enhanced crosswalks and pedestrian refuges at high-volume intersections to improve pedestrian safety and reduce crossing distances.

3. Transit and TDM Support

- Coordinate with the City to implement transit priority measures, including queue jump lanes and transit signal priority, particularly along Innes Road.
- Provide real-time transit information within the site and improve pedestrian access to nearby transit stops.

4. Monitoring and Future Review

- Reassess intersection performance post-occupancy (i.e., after full build-out in 2026) to determine if additional operational or geometric modifications are warranted.
- Monitor growth trends toward 2031 and beyond, particularly at the Mer Bleue & Innes intersection, which may require further capacity upgrades if congestion escalates.

The proposed development aligns with the City of Ottawa's vision for sustainable, multi-modal transportation. By addressing the outlined challenges, and implementing the recommended improvements, the project can contribute positively to the area's mobility and safety objectives while supporting future growth.



APPENDICES



APPENDIX A – TRAFFIC COUNT AND SIGNAL TIMING DATA



APPENDIX B - COLLISION DATA



APPENDIX C – TRANSPORTATION DEMAND MANAGEMENT CHECKLIST



APPENDIX D – MMLOS ANALYSIS



APPENDIX E - SYNCHRO ANALYSIS OUTPUT REPORTS



APPENDICES



APPENDIX A – TRAFFIC COUNT AND SIGNAL TIMING DATA



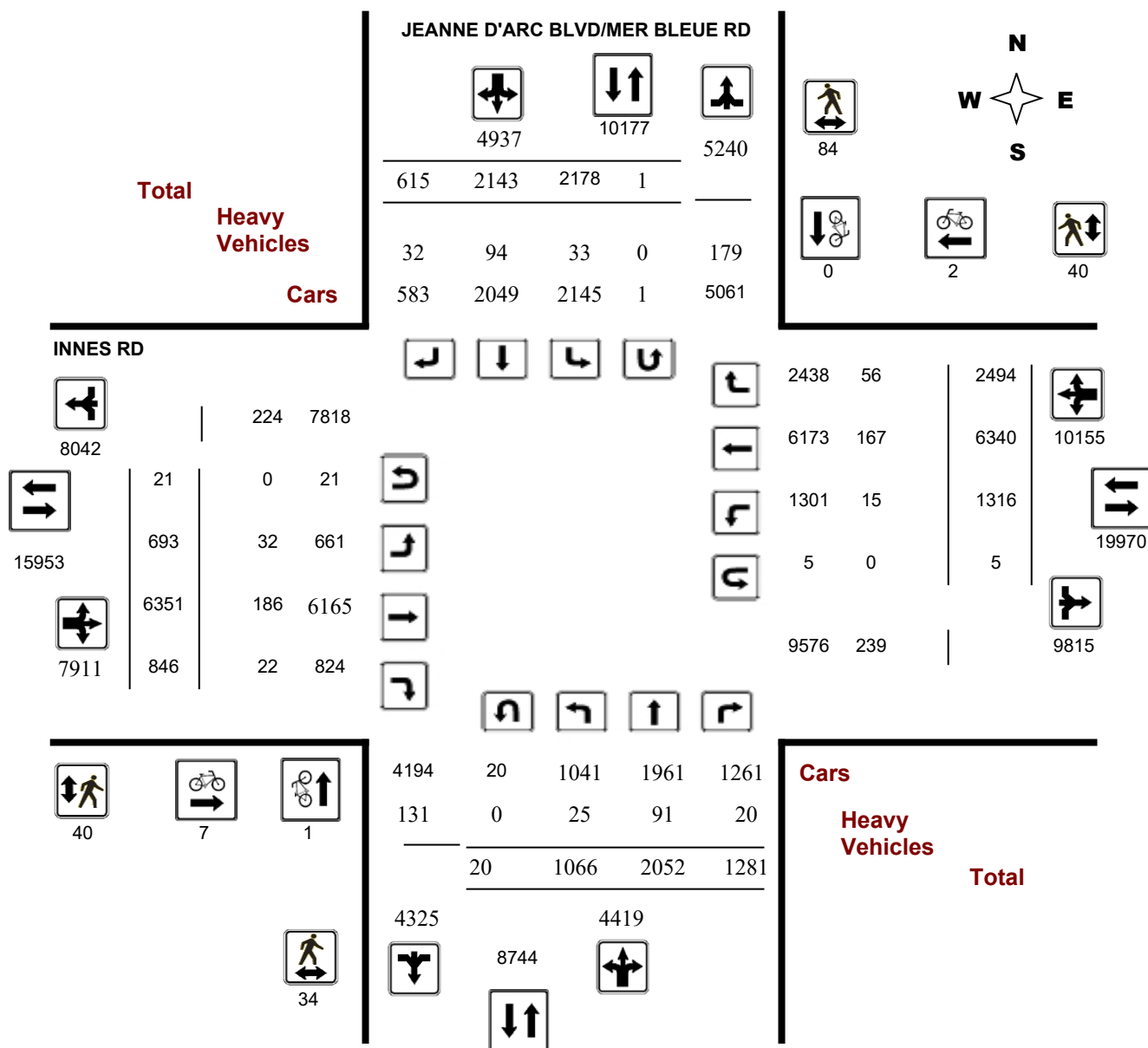
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WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study Diagram



5469225 - THU JAN 09, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

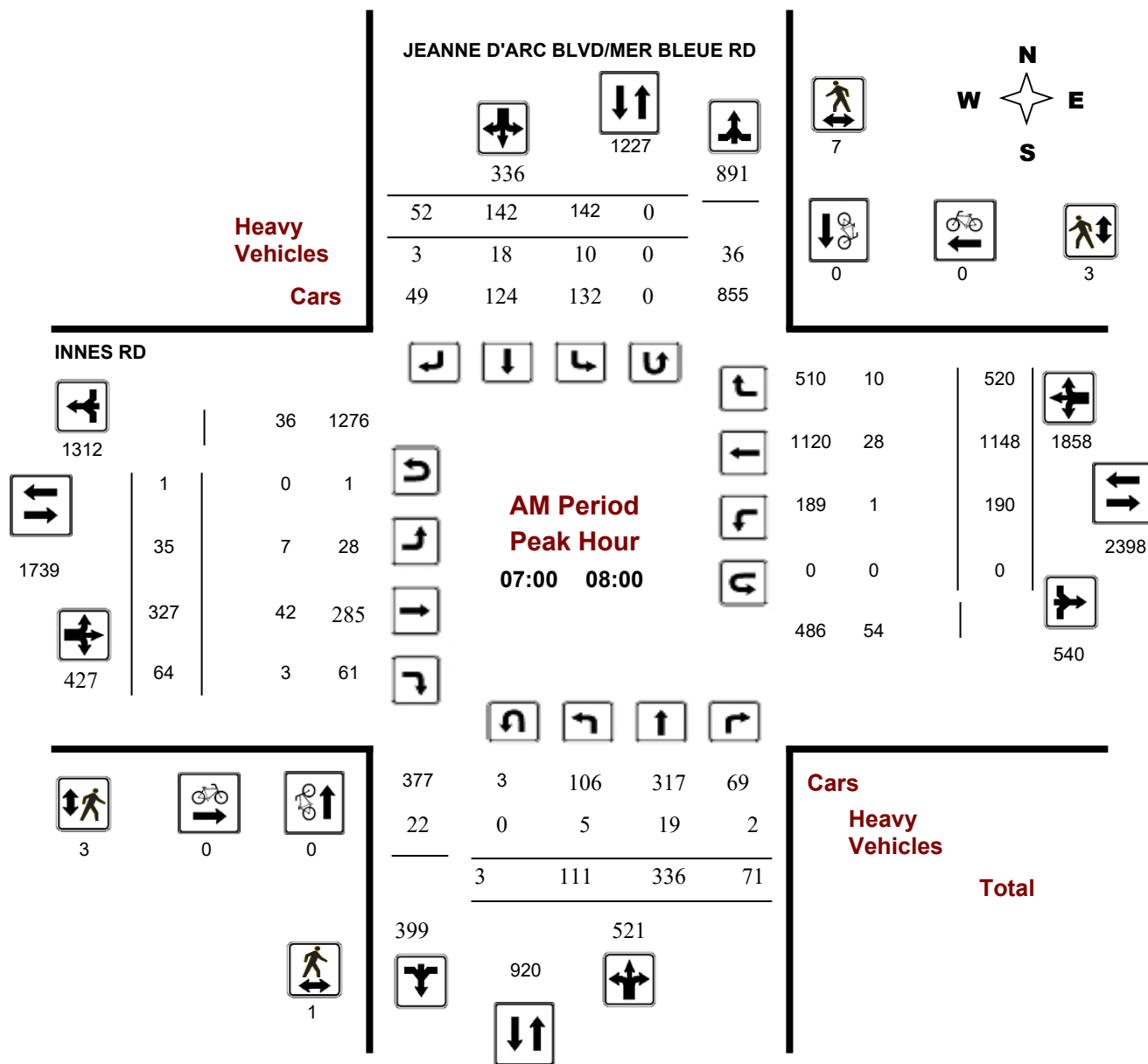
INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

Start Time: 07:00

WO No: 39284

Device: Miovision



Comments 5469225 - THU JAN 09, 2020 - 8HRS - LORETTA

Turning Movement Count - Peak Hour Diagram

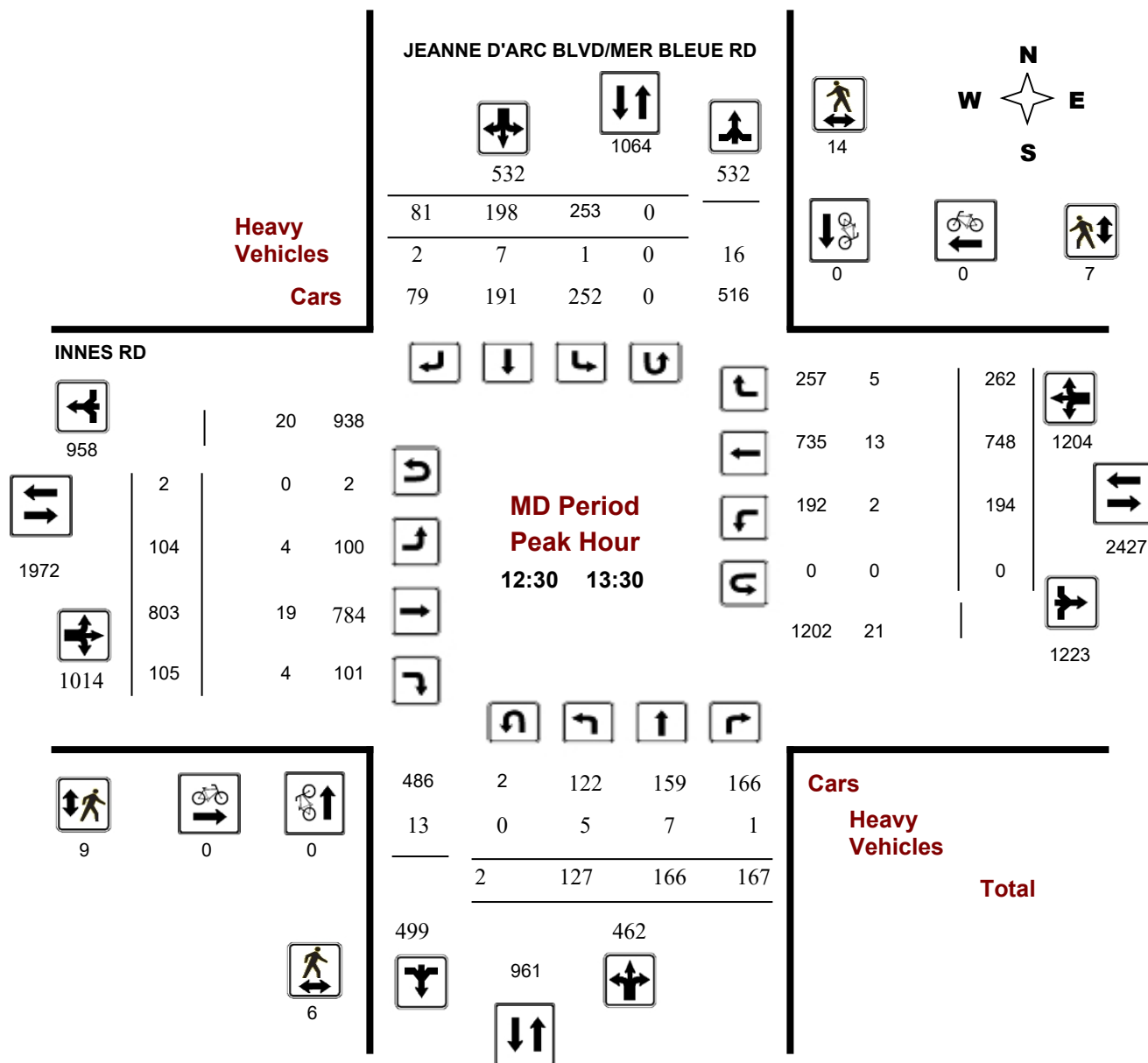
INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

Start Time: 07:00

WO No: 39284

Device: Miovision



Turning Movement Count - Peak Hour Diagram

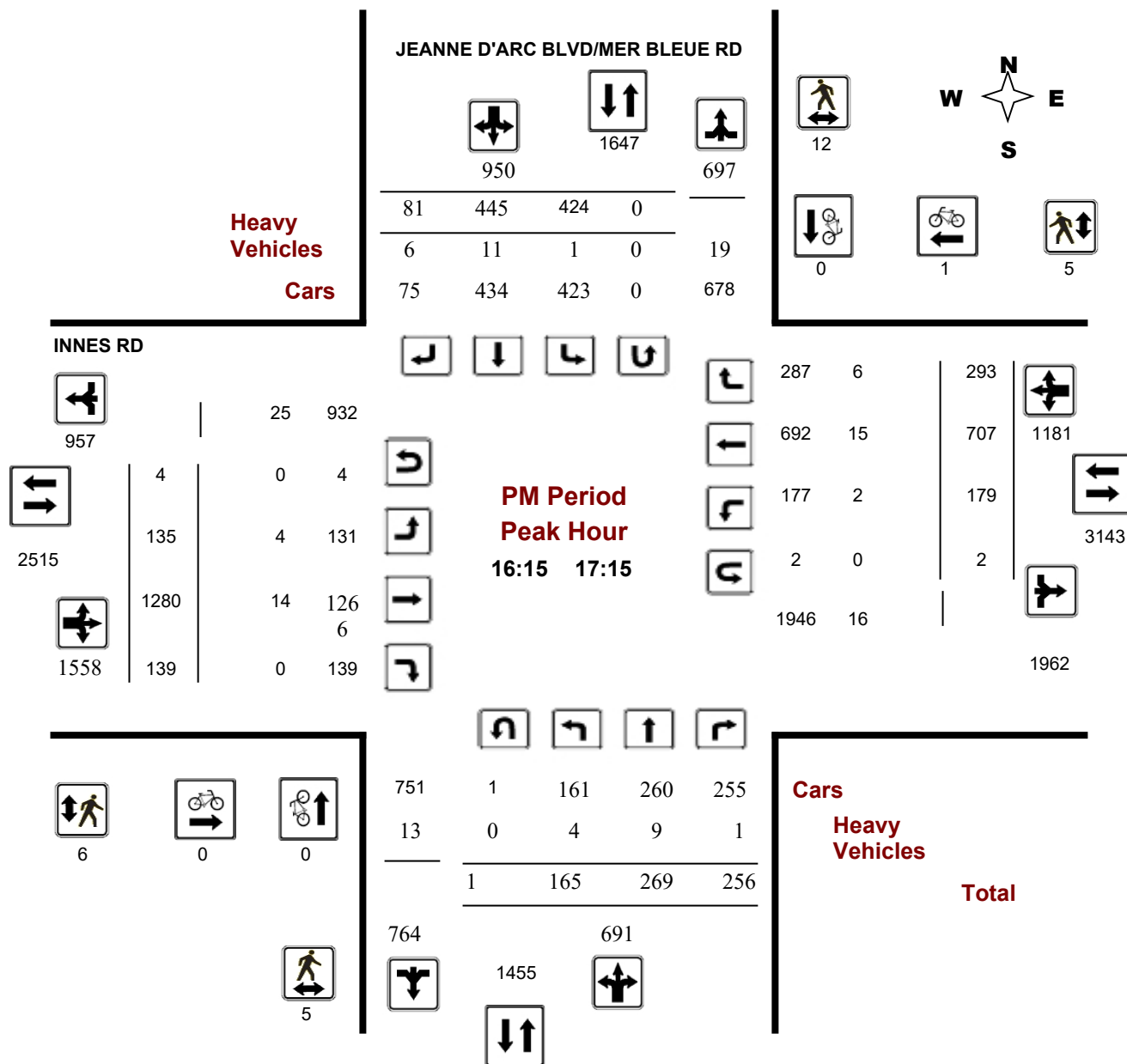
INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

Start Time: 07:00

WO No: 39284

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, January 09, 2020

Total Observed U-Turns

AADT Factor

Northbound: 20 Southbound: 1

1.00

Eastbound: 21 Westbound: 5

JEANNE D'ARC BLVD/MER BLEUE RD

INNES RD

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT		
07:00 08:00	111	336	71	518	142	142	52	336	854	35	327	64	426	190	1148	520	1858	2284	3138
08:00 09:00	121	361	63	545	173	168	57	398	943	45	355	64	464	117	911	388	1416	1880	2823
09:00 10:00	94	230	110	434	153	147	63	363	797	53	459	80	592	125	657	236	1018	1610	2407
11:30 12:30	127	171	182	480	244	226	92	562	1042	94	791	109	994	164	737	243	1144	2138	3180
12:30 13:30	127	166	167	460	253	198	81	532	992	104	803	105	1012	194	748	262	1204	2216	3208
15:00 16:00	152	270	231	653	412	398	92	902	1555	107	1156	129	1392	175	730	278	1183	2575	4130
16:00 17:00	163	259	245	667	427	435	94	956	1623	135	1255	137	1527	168	713	308	1189	2716	4339
17:00 18:00	171	259	212	642	374	429	84	887	1529	120	1205	158	1483	183	696	259	1138	2621	4150
Sub Total	1066	2052	1281	4399	2178	2143	615	4936	9335	693	6351	846	7890	1316	6340	2494	10150	18040	27375
U Turns				20				1	21				21				5	26	47
Total	1066	2052	1281	4419	2178	2143	615	4937	9356	693	6351	846	7911	1316	6340	2494	10155	18066	27422
EQ 12Hr	1482	2852	1781	6142	3027	2979	855	6862	13005	963	8828	1176	10996	1829	8813	3467	14115	25112	38117
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12Hr	1396	2688	1678	5789	2853	2807	806	6467	13005	908	8320	1108	10363	1724	8305	3267	13303	25112	38117
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													1						
AVG 24Hr	1829	3521	2198	7583	3738	3678	1055	8472	16055	1189	10899	1452	13576	2258	10880	4280	17427	31003	47058

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

JEANNE D'ARC BLVD/MER BLEUE RD

INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	29	84	6	119	21	29	14	64	5	14	53	16	83	34	295	129	458	5	724
07:15	07:30	24	82	16	123	28	37	16	81	14	8	91	15	114	37	348	155	540	14	858
07:30	07:45	30	92	20	142	39	48	11	98	20	4	94	21	120	65	245	123	433	20	793
07:45	08:00	28	78	29	137	54	28	11	93	18	9	89	12	110	54	260	113	427	18	767
08:00	08:15	20	90	17	128	33	42	12	87	12	8	71	21	100	32	218	109	360	12	675
08:15	08:30	29	79	13	121	49	44	12	105	14	12	90	18	120	32	265	105	402	14	748
08:30	08:45	36	104	14	154	40	50	14	104	9	9	80	13	102	24	219	98	341	9	701
08:45	09:00	36	88	19	143	51	32	19	102	11	16	114	12	142	29	209	76	314	11	701
09:00	09:15	27	61	29	121	37	48	15	100	16	13	92	13	118	28	154	60	242	16	581
09:15	09:30	24	69	33	126	50	33	19	102	10	14	122	20	156	31	171	67	269	10	653
09:30	09:45	26	40	26	92	31	34	16	81	11	11	115	24	150	31	178	63	272	11	595
09:45	10:00	17	60	22	100	35	32	13	80	6	15	130	23	168	35	154	46	235	6	583
11:30	11:45	26	43	51	123	60	62	22	144	9	19	194	32	247	42	189	55	288	9	802
11:45	12:00	38	52	27	117	61	56	26	143	14	28	171	20	219	39	198	58	295	14	774
12:00	12:15	34	42	50	127	65	55	22	142	6	26	194	33	254	34	171	63	268	6	791
12:15	12:30	29	34	54	117	58	53	22	133	7	21	232	24	277	49	179	67	295	7	822
12:30	12:45	27	51	39	117	73	43	23	139	5	28	197	25	251	48	177	62	287	5	794
12:45	13:00	34	45	39	118	61	57	22	140	5	32	203	24	259	38	172	65	275	5	792
13:00	13:15	33	32	45	112	60	49	16	125	8	18	203	27	249	58	188	62	308	8	794
13:15	13:30	33	38	44	115	59	49	20	128	5	26	200	29	255	50	211	73	334	5	832
15:00	15:15	30	75	59	164	99	89	22	210	8	23	268	40	331	46	164	67	277	8	982
15:15	15:30	41	69	58	168	113	103	31	247	13	26	303	30	360	41	196	69	306	13	1081
15:30	15:45	42	54	53	149	95	89	17	201	6	32	297	36	366	38	176	74	288	6	1004
15:45	16:00	39	72	61	173	105	117	22	244	10	26	288	23	338	50	194	68	312	10	1067
16:00	16:15	50	52	57	159	106	94	36	236	8	30	276	40	350	37	186	77	300	8	1045
16:15	16:30	38	59	56	153	110	120	15	245	12	36	337	32	406	49	173	71	294	12	1098
16:30	16:45	35	74	62	171	95	107	19	221	9	30	312	28	370	38	187	84	309	9	1071
16:45	17:00	40	74	70	184	116	114	24	254	7	39	330	37	407	44	167	76	288	7	1133
17:00	17:15	52	62	68	183	103	104	23	230	4	30	301	42	375	48	180	62	290	4	1078
17:15	17:30	38	60	49	147	84	123	18	225	4	35	313	37	386	45	180	80	305	4	1063
17:30	17:45	40	63	44	148	103	115	20	238	4	27	321	43	392	41	171	54	266	4	1044
17:45	18:00	41	74	51	168	84	87	23	195	5	28	270	36	336	49	165	63	277	5	976
Total:		1066	2052	1281	4419	2178	2143	615	4937	295	693	6351	846	7911	1316	6340	2494	10155	295	27,422

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

JEANNE D'ARC BLVD/MER BLEUE RD

INNES RD

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

**JEANNE D'ARC BLVD/MER BLEUE
RD**

INNES RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	1	0	1	1
07:15 07:30	0	4	4	0	1	1	5
07:30 07:45	0	1	1	0	1	1	2
07:45 08:00	1	2	3	2	1	3	6
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	1	1	1	0	1	2
08:30 08:45	1	8	9	1	7	8	17
08:45 09:00	0	0	0	1	0	1	1
09:00 09:15	1	3	4	2	0	2	6
09:15 09:30	0	1	1	0	0	0	1
09:30 09:45	1	2	3	1	0	1	4
09:45 10:00	0	3	3	3	1	4	7
11:30 11:45	1	4	5	1	2	3	8
11:45 12:00	1	0	1	1	2	3	4
12:00 12:15	2	1	3	1	0	1	4
12:15 12:30	1	1	2	1	0	1	3
12:30 12:45	1	2	3	1	1	2	5
12:45 13:00	1	2	3	2	2	4	7
13:00 13:15	3	8	11	4	3	7	18
13:15 13:30	1	2	3	2	1	3	6
15:00 15:15	2	1	3	0	4	4	7
15:15 15:30	1	4	5	0	1	1	6
15:30 15:45	1	3	4	2	2	4	8
15:45 16:00	2	12	14	1	0	1	15
16:00 16:15	2	1	3	0	3	3	6
16:15 16:30	2	6	8	4	3	7	15
16:30 16:45	2	3	5	0	1	1	6
16:45 17:00	1	2	3	0	1	1	4
17:00 17:15	0	1	1	2	0	2	3
17:15 17:30	2	3	5	3	2	5	10
17:30 17:45	3	2	5	3	1	4	9
17:45 18:00	1	1	2	0	0	0	2
Total	34	84	118	40	40	80	198

5469225 - THU JAN 09, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

JEANNE D'ARC BLVD/MER BLEUE RD

INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	3	0	3	0	2	0	2	5	2	8	1	11	0	7	6	13	24	29
07:15	07:30	1	4	0	5	2	5	2	9	14	2	16	1	19	0	6	0	6	25	39
07:30	07:45	2	7	2	11	2	7	0	9	20	1	12	1	14	1	5	1	7	21	41
07:45	08:00	2	5	0	7	6	4	1	11	18	2	6	0	8	0	10	3	13	21	39
08:00	08:15	1	5	2	8	1	3	0	4	12	1	7	0	8	0	9	2	11	19	31
08:15	08:30	0	6	0	6	1	4	3	8	14	1	7	1	9	2	11	1	14	23	37
08:30	08:45	0	3	0	3	2	3	1	6	9	1	12	0	13	0	9	4	13	26	35
08:45	09:00	1	3	0	4	1	5	1	7	11	1	7	0	8	0	10	1	11	19	30
09:00	09:15	0	7	0	7	3	3	3	9	16	0	8	1	9	0	6	5	11	20	36
09:15	09:30	0	3	0	3	1	3	3	7	10	1	12	0	13	0	4	1	5	18	28
09:30	09:45	1	3	2	6	3	2	0	5	11	0	7	2	9	0	2	4	6	15	26
09:45	10:00	0	2	1	3	1	0	2	3	6	3	3	2	8	2	4	0	6	14	20
11:30	11:45	0	1	1	2	2	5	0	7	9	0	5	2	7	0	4	0	4	11	20
11:45	12:00	2	7	2	11	1	1	1	3	14	1	3	0	4	1	8	0	9	13	27
12:00	12:15	0	1	0	1	2	3	0	5	6	0	4	0	4	0	4	3	7	11	17
12:15	12:30	0	0	2	2	2	2	1	5	7	1	7	3	11	2	4	0	6	17	24
12:30	12:45	1	3	0	4	0	1	0	1	5	0	3	2	5	0	3	1	4	9	14
12:45	13:00	1	0	0	1	1	2	1	4	5	1	4	0	5	1	3	2	6	11	16
13:00	13:15	2	3	0	5	0	3	0	3	8	1	7	0	8	0	4	2	6	14	22
13:15	13:30	1	1	1	3	0	1	1	2	5	2	5	2	9	1	3	0	4	13	18
15:00	15:15	0	1	3	4	0	4	0	4	8	0	2	1	3	2	5	3	10	13	21
15:15	15:30	1	5	2	8	0	3	2	5	13	1	4	1	6	0	6	2	8	14	27
15:30	15:45	1	2	0	3	0	2	1	3	6	0	3	0	3	1	4	3	8	11	17
15:45	16:00	0	3	0	3	0	7	0	7	10	3	7	0	10	0	6	1	7	17	27
16:00	16:15	3	1	0	4	0	3	1	4	8	1	5	2	8	0	6	1	7	15	23
16:15	16:30	1	3	0	4	1	4	3	8	12	1	3	0	4	1	5	2	8	12	24
16:30	16:45	2	2	1	5	0	3	1	4	9	0	3	0	3	0	4	2	6	9	18
16:45	17:00	0	3	0	3	0	2	2	4	7	2	2	0	4	1	3	0	4	8	15
17:00	17:15	1	1	0	2	0	2	0	2	4	1	6	0	7	0	3	2	5	12	16
17:15	17:30	0	0	0	0	1	2	1	4	4	1	1	0	2	0	4	1	5	7	11
17:30	17:45	1	2	0	3	0	1	0	1	4	0	5	0	5	0	2	0	2	7	11
17:45	18:00	0	1	1	2	0	2	1	3	5	1	2	0	3	0	3	3	6	9	14
Total:	None	25	91	20	136	33	94	32	159	295	32	186	22	240	15	167	56	238	478	773



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD

Survey Date: Thursday, January 09, 2020

WO No: 39284

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

JEANNE D'ARC BLVD/MER BLEUE

INNES RD

Time Period		RD Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	1	0	0	0	1
07:30	07:45	0	0	1	0	1
07:45	08:00	2	0	0	0	2
08:00	08:15	1	0	0	1	2
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	4	0	0	0	4
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	1	0	0	0	1
11:30	11:45	3	0	2	2	7
11:45	12:00	0	0	0	0	0
12:00	12:15	1	0	1	0	2
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	1	0	1
12:45	13:00	0	0	0	0	0
13:00	13:15	2	0	1	0	3
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	1	0	1
15:30	15:45	0	0	1	0	1
15:45	16:00	1	0	1	0	2
16:00	16:15	0	0	4	0	4
16:15	16:30	0	0	1	1	2
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	1	1	2
17:00	17:15	1	0	2	0	3
17:15	17:30	0	0	1	0	1
17:30	17:45	1	0	1	0	2
17:45	18:00	2	1	2	0	5
Total		20	1	21	5	47

Survey Date: Thursday, April 19, 2018

Start Time: 07:00

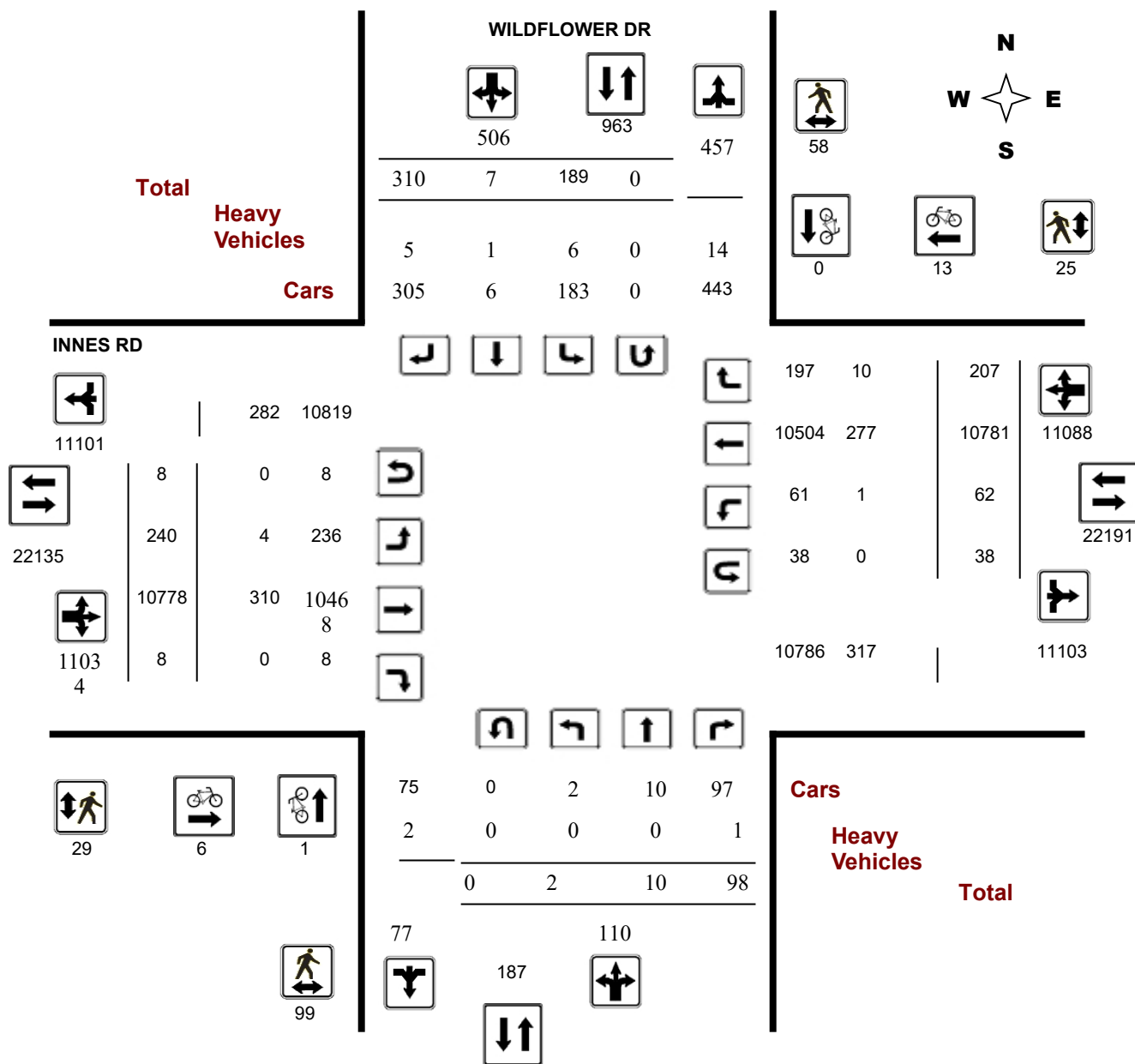
WO No:

37741

Device:

Miovision

Full Study Diagram



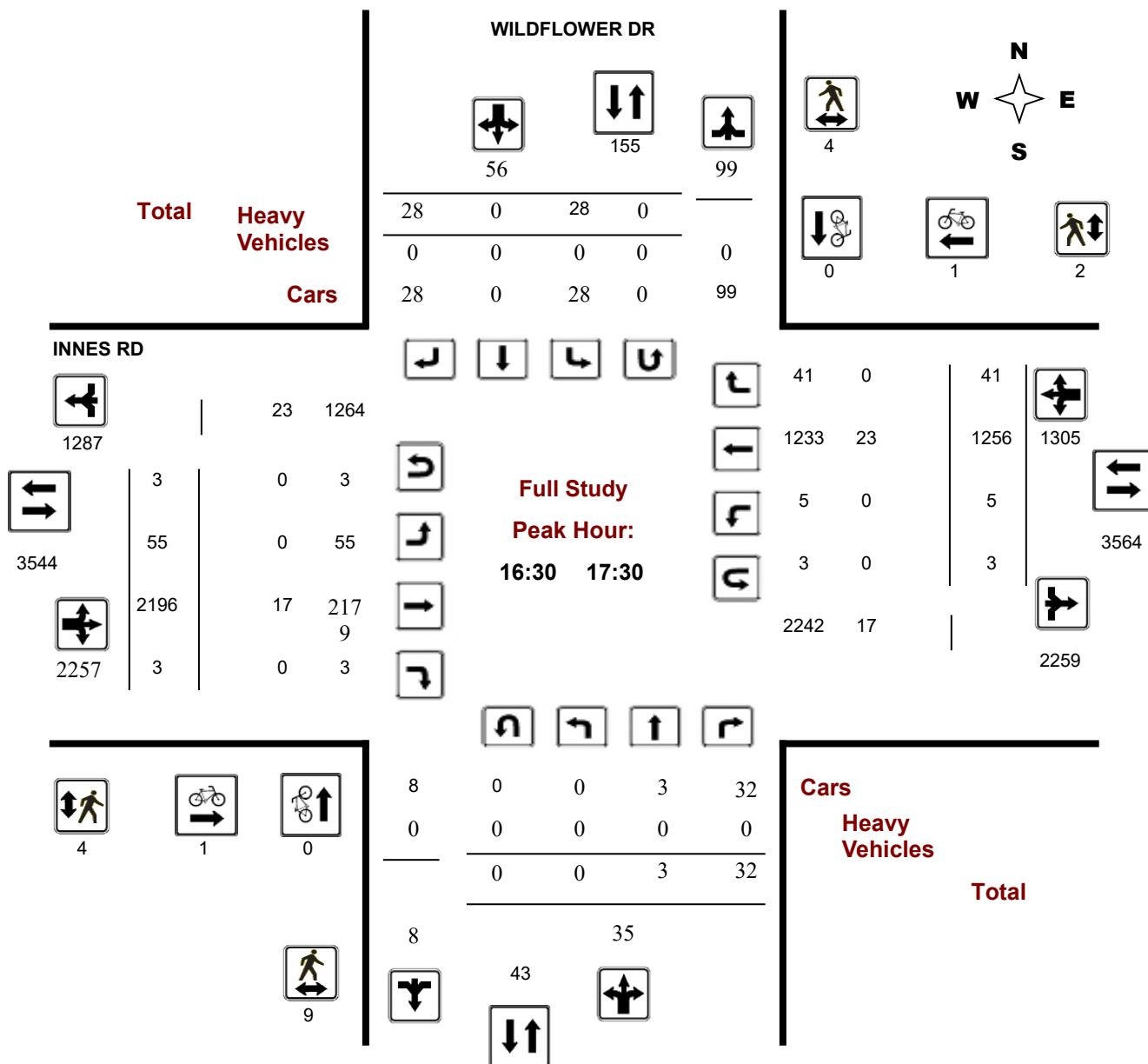
Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

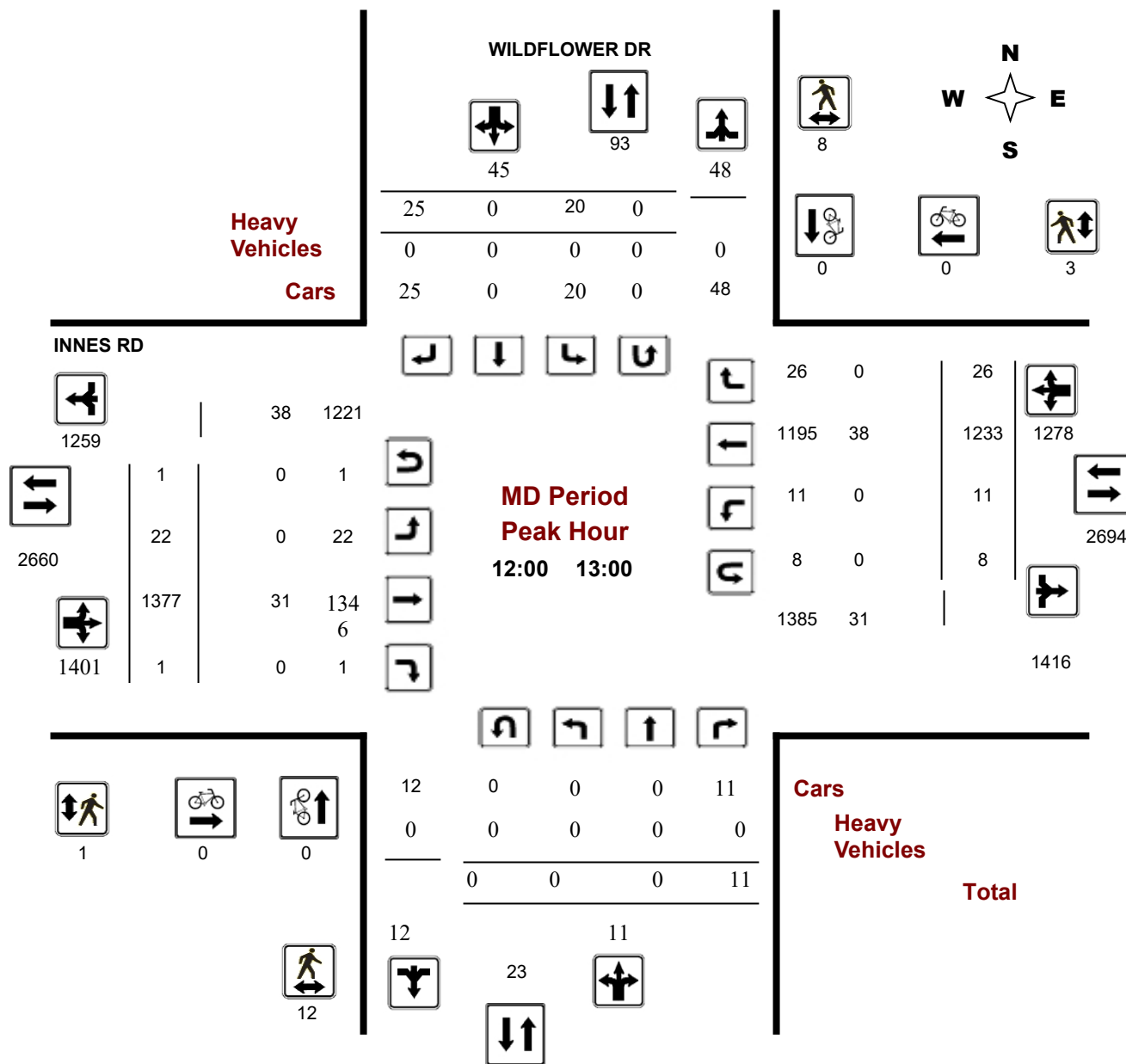
INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

Start Time: 07:00

WO No: 37741

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

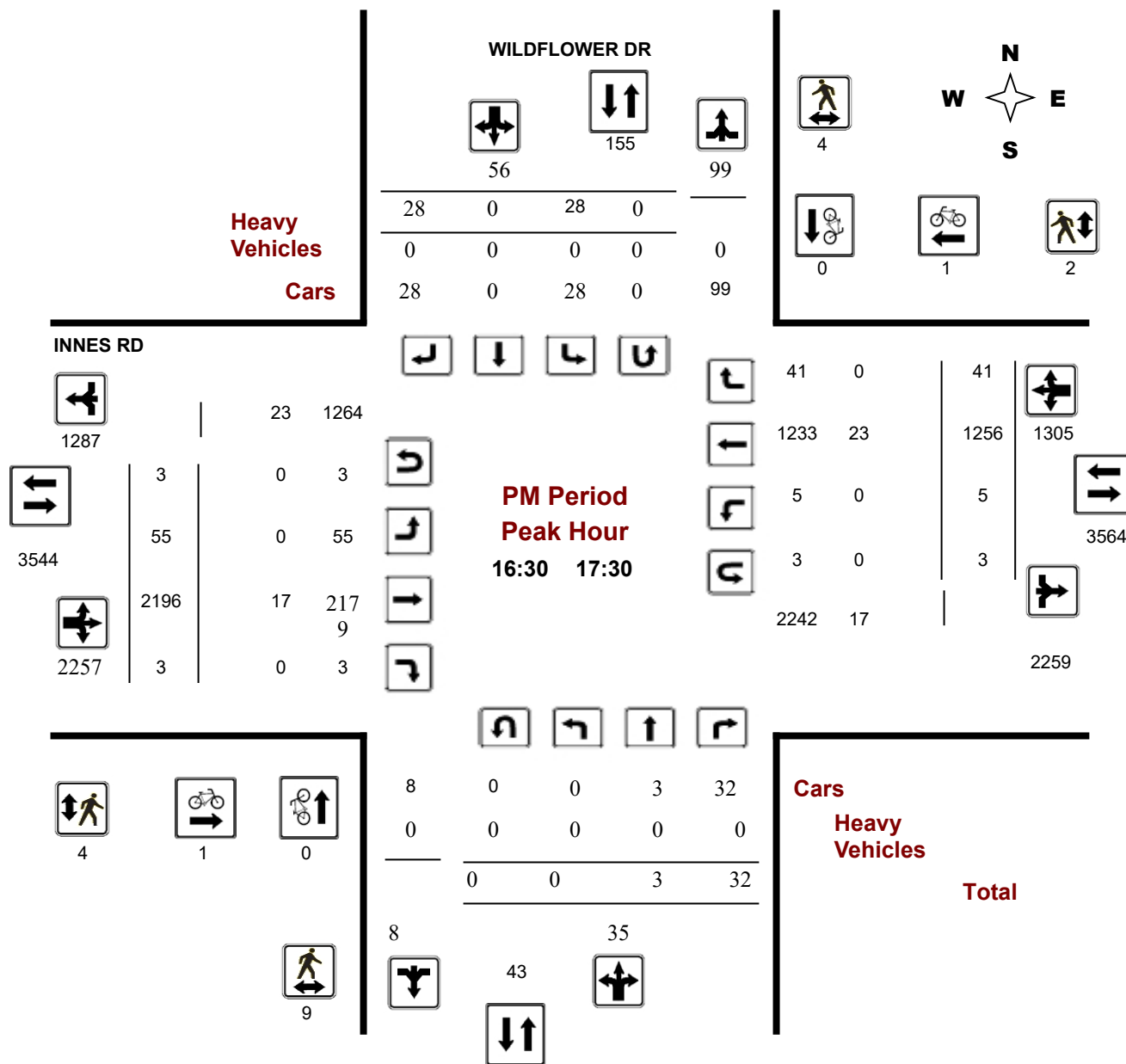
INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

Start Time: 07:00

WO No: 37741

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, April 19, 2018

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 0
Eastbound: 8 Westbound: 38

.90

WILDFLOWER DR

INNES RD

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT		
07:00 08:00	0	0	3	3	13	0	76	89	92	11	554	0	565	13	1928	10	1951	2516	2608
08:00 09:00	0	2	2	4	20	0	52	72	76	17	711	1	729	2	1543	17	1562	2291	2367
09:00 10:00	0	1	6	7	21	2	23	46	53	11	847	0	858	10	1104	13	1127	1985	2038
11:30 12:30	0	0	9	9	15	0	31	46	55	22	1375	2	1399	8	1191	23	1222	2621	2676
12:30 13:30	1	0	9	10	29	1	25	55	65	27	1345	0	1372	8	1203	26	1237	2609	2674
15:00 16:00	0	1	19	20	33	1	36	70	90	56	1729	2	1787	8	1271	47	1326	3113	3203
16:00 17:00	0	1	26	27	22	2	29	53	80	47	2114	2	2163	5	1313	34	1352	3515	3595
17:00 18:00	1	5	24	30	36	1	38	75	105	49	2103	1	2153	8	1228	37	1273	3426	3531
Sub Total	2	10	98	110	189	7	310	506	616	240	10778	8	11026	62	10781	207	11050	22076	22692
U Turns	0			0	0			0	0	8			8	38			38	46	46
Total	2	10	98	110	189	7	310	506	616	248	10778	8	11034	100	10781	207	11088	22122	22738
EQ 12Hr	3	14	136	153	263	10	431	704	857	345	14981	11	15337	139	14986	288	15413	30750	31607

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

1.39

AVG 12Hr	3	13	122	138	237	9	388	634	772	310	13483	10	13803	125	13487	259	13871	27674	28446
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Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

.90

AVG 24Hr	4	17	160	181	310	12	508	830	1011	406	17663	13	18082	164	17668	339	18171	36253	37264
-----------------	---	----	-----	-----	-----	----	-----	-----	------	-----	-------	----	-------	-----	-------	-----	-------	-------	-------

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

WILDFLOWER DR

INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15		0	0			0	13		18		88	0			467	1		563	581
07:15 07:30		0	0			0	25		27		116	0			486	3		614	641
07:30 07:45		0	1			0	22		26		173	0			510	4		691	717
07:45 08:00		0	2			0	16		21		177	0			465	2		650	671
08:00 08:15		0	0			0	17		21		160	0			438	3		602	623
08:15 08:30		1	2			0	13		23		170	0			413	8		601	624
08:30 08:45		0	0			0	13		16		175	0			350	3		534	550
08:45 09:00		1	0			0	9		16		206	1			342	3		557	573
09:00 09:15		1	1			1	3		13		168	0			282	3		459	472
09:15 09:30		0	1			0	6		11		225	0			269	4		504	515
09:30 09:45		0	1			1	5		10		204	0			295	4		514	524
09:45 10:00		0	3			0	9		19		250	0			258	2		514	533
11:30 11:45		0	2			0	8		13		320	1			329	5		666	679
11:45 12:00		0	3			0	14		21		346	0			289	7		649	670
12:00 12:15		0	1			0	3		5		376	0			293	5		685	690
12:15 12:30		0	3			0	6		16		333	1			280	6		630	646
12:30 12:45		0	5			0	8		20		310	0			345	6		671	691
12:45 13:00		0	2			0	8		15		358	0			315	9		693	708
13:00 13:15		0	0			1	6		16		317	0			252	6		584	600
13:15 13:30		0	2			0	3		14		360	0			291	5		668	682
15:00 15:15		0	2			0	7		19		389	0			307	14		728	747
15:15 15:30		0	9			0	11		32		419	2			309	13		759	791
15:30 15:45		0	4			0	10		21		436	0			314	12		779	800
15:45 16:00		1	4			1	8		18		485	0			341	8		852	870
16:00 16:15		0	6			1	3		15		511	0			335	6		867	882
16:15 16:30		0	7			1	13		24		519	0			315	6		850	874
16:30 16:45		1	6			0	6		22		540	1			305	12		870	892
16:45 17:00		0	7			0	7		19		544	1			358	10		933	952
17:00 17:15		2	8			0	8		26		560	0			310	8		895	921
17:15 17:30		0	11			0	7		24		552	1			283	11		864	888
17:30 17:45		3	2			0	11		28		476	0			312	8		816	844
17:45 18:00		0	3			1	12		27		515	0			323	10		860	887
Total:	0	10	98	0	0	7	310	0	616	0	10778	8	0	0	10781	207	0	616	22,738

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

WILDFLOWER DR

INNES RD

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	0	0	0	1	0	1	1
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	0	0	0	0	2	2	2
08:00 08:15	0	0	0	1	0	1	1
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	0	0	0	0	1	1	1
08:45 09:00	0	0	0	0	0	0	0
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	3	3	3
13:15 13:30	0	0	0	1	0	1	1
15:00 15:15	1	0	1	0	2	2	3
15:15 15:30	0	0	0	0	1	1	1
15:30 15:45	0	0	0	0	1	1	1
15:45 16:00	0	0	0	0	1	1	1
16:00 16:15	0	0	0	1	0	1	1
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	1	1	2	2
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	1	1	2	2
Total	1	0	1	6	13	19	20



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

WILDFLOWER DR

INNES RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	2	3	0	0	0	3
07:15 07:30	0	1	1	0	0	0	1
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	4	1	5	0	0	0	5
08:00 08:15	1	1	2	0	0	0	2
08:15 08:30	2	0	2	0	0	0	2
08:30 08:45	2	3	5	1	2	3	8
08:45 09:00	2	3	5	1	0	1	6
09:00 09:15	4	0	4	1	0	1	5
09:15 09:30	3	2	5	1	2	3	8
09:30 09:45	5	2	7	0	1	1	8
09:45 10:00	10	2	12	10	0	10	22
11:30 11:45	6	1	7	0	0	0	7
11:45 12:00	3	0	3	1	3	4	7
12:00 12:15	5	2	7	0	1	1	8
12:15 12:30	1	1	2	0	0	0	2
12:30 12:45	4	1	5	0	0	0	5
12:45 13:00	2	4	6	1	2	3	9
13:00 13:15	4	2	6	2	2	4	10
13:15 13:30	1	0	1	1	3	4	5
15:00 15:15	0	5	5	0	0	0	5
15:15 15:30	6	2	8	0	3	3	11
15:30 15:45	5	6	11	1	1	2	13
15:45 16:00	2	3	5	0	2	2	7
16:00 16:15	3	4	7	0	0	0	7
16:15 16:30	6	3	9	5	0	5	14
16:30 16:45	4	1	5	0	1	1	6
16:45 17:00	2	1	3	3	0	3	6
17:00 17:15	3	1	4	1	1	2	6
17:15 17:30	0	1	1	0	0	0	1
17:30 17:45	1	2	3	0	0	0	3
17:45 18:00	7	1	8	0	1	1	9
Total	99	58	157	29	25	54	211



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

WILDFLOWER DR

INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	0	0	0		1	0	0		1	0	9	0		0	7	1		17	18
07:15 07:30	0	0	0		0	0	1		1	2	13	0		0	8	1		24	25
07:30 07:45	0	0	1		0	0	0		1	0	13	0		0	12	0		25	26
07:45 08:00	0	0	0		1	0	0		1	0	11	0		1	13	0		25	26
08:00 08:15	0	0	0		1	0	0		1	0	10	0		0	8	1		19	20
08:15 08:30	0	0	0		0	0	1		1	0	14	0		0	14	2		30	31
08:30 08:45	0	0	0		0	0	0		0	0	10	0		0	6	0		16	16
08:45 09:00	0	0	0		0	0	1		1	1	10	0		0	20	0		31	32
09:00 09:15	0	0	0		0	0	0		0	0	6	0		0	11	0		17	17
09:15 09:30	0	0	0		0	0	0		0	0	13	0		0	11	0		24	24
09:30 09:45	0	0	0		0	1	0		1	0	11	0		0	8	0		19	20
09:45 10:00	0	0	0		0	0	0		0	0	12	0		0	7	0		19	19
11:30 11:45	0	0	0		0	0	0		0	0	4	0		0	13	0		17	17
11:45 12:00	0	0	0		0	0	0		0	0	14	0		0	2	0		16	16
12:00 12:15	0	0	0		0	0	0		0	0	8	0		0	8	0		16	16
12:15 12:30	0	0	0		0	0	0		0	0	7	0		0	9	0		16	16
12:30 12:45	0	0	0		0	0	0		0	0	7	0		0	10	0		17	17
12:45 13:00	0	0	0		0	0	0		0	0	9	0		0	11	0		20	20
13:00 13:15	0	0	0		0	0	1		1	0	11	0		0	4	0		15	16
13:15 13:30	0	0	0		0	0	0		0	0	9	0		0	5	0		14	14
15:00 15:15	0	0	0		1	0	0		1	0	15	0		0	6	0		21	22
15:15 15:30	0	0	0		2	0	0		2	0	17	0		0	8	0		25	27
15:30 15:45	0	0	0		0	0	0		0	1	10	0		0	9	2		22	22
15:45 16:00	0	0	0		0	0	1		1	0	10	0		0	13	3		26	27
16:00 16:15	0	0	0		0	0	0		0	0	10	0		0	4	0		14	14
16:15 16:30	0	0	0		0	0	0		0	0	14	0		0	9	0		23	23
16:30 16:45	0	0	0		0	0	0		0	0	4	0		0	4	0		8	8
16:45 17:00	0	0	0		0	0	0		0	0	5	0		0	7	0		12	12
17:00 17:15	0	0	0		0	0	0		0	0	4	0		0	7	0		11	11
17:15 17:30	0	0	0		0	0	0		0	0	4	0		0	5	0		9	9
17:30 17:45	0	0	0		0	0	0		0	0	8	0		0	7	0		15	15
17:45 18:00	0	0	0		0	0	0		0	0	8	0		0	11	0		19	19
Total: None	0	0	1	0	6	1	5	0	13	4	310	0	0	1	277	10	0	602	615



Transportation Services - Traffic Services

Turning Movement Count - Study Results

INNES RD @ WILDFLOWER DR

Survey Date: Thursday, April 19, 2018

WO No: 37741

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

WILDFLOWER DR

INNES RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	2	2
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	1	1	2
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	1	1
09:00	09:15	0	0	0	1	1
09:15	09:30	0	0	0	3	3
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	2	2
11:30	11:45	0	0	0	2	2
11:45	12:00	0	0	0	1	1
12:00	12:15	0	0	0	4	4
12:15	12:30	0	0	0	2	2
12:30	12:45	0	0	1	0	1
12:45	13:00	0	0	0	2	2
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	4	4
15:00	15:15	0	0	1	0	1
15:15	15:30	0	0	0	2	2
15:30	15:45	0	0	0	2	2
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	1	0	1
16:15	16:30	0	0	0	1	1
16:30	16:45	0	0	1	0	1
16:45	17:00	0	0	1	1	2
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	1	2	3
17:30	17:45	0	0	0	2	2
17:45	18:00	0	0	1	3	4
Total		0	0	8	38	46

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

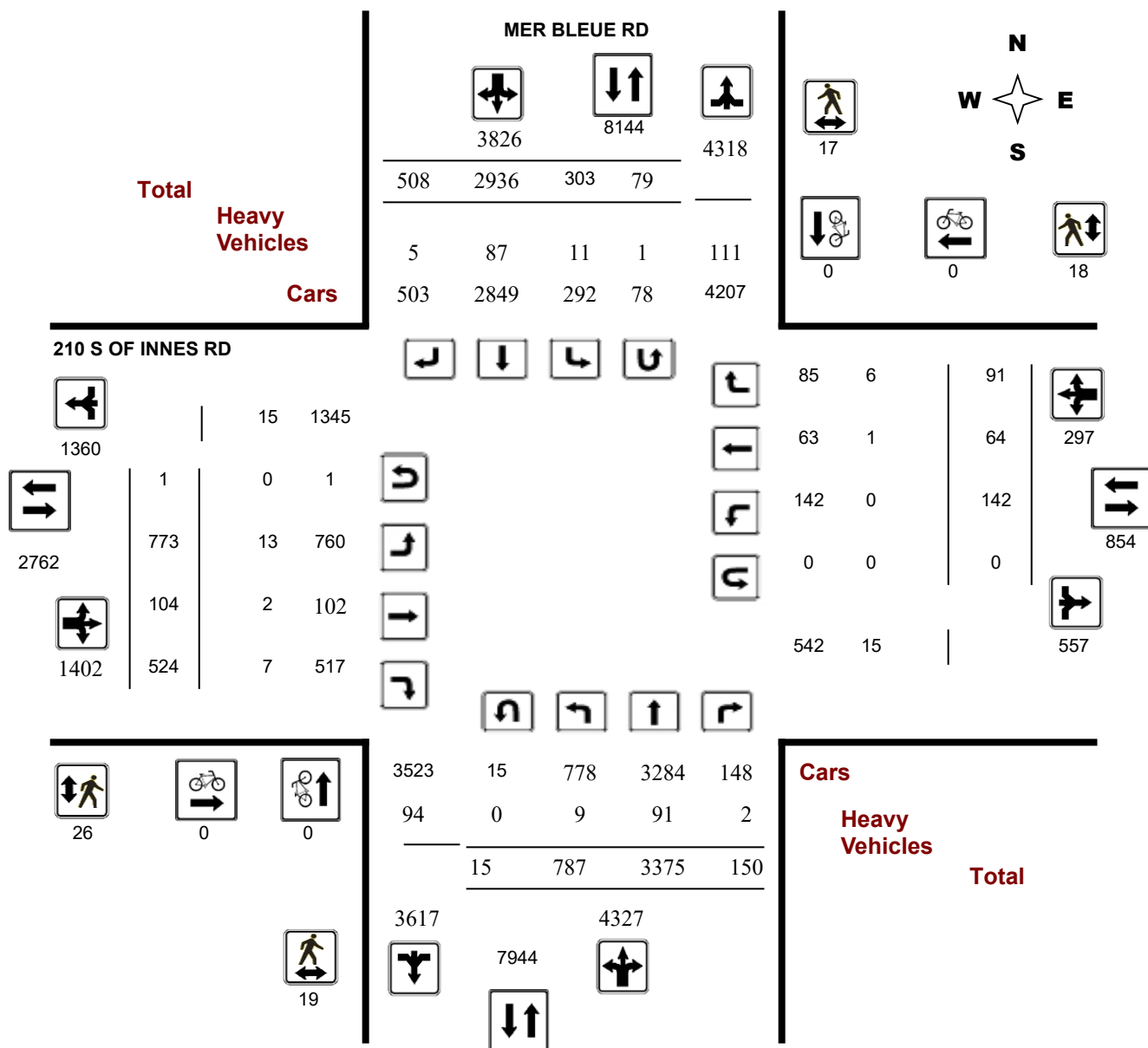
Survey Date: Tuesday, January 15, 2019

Start Time: 07:00

WO No: 38272

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

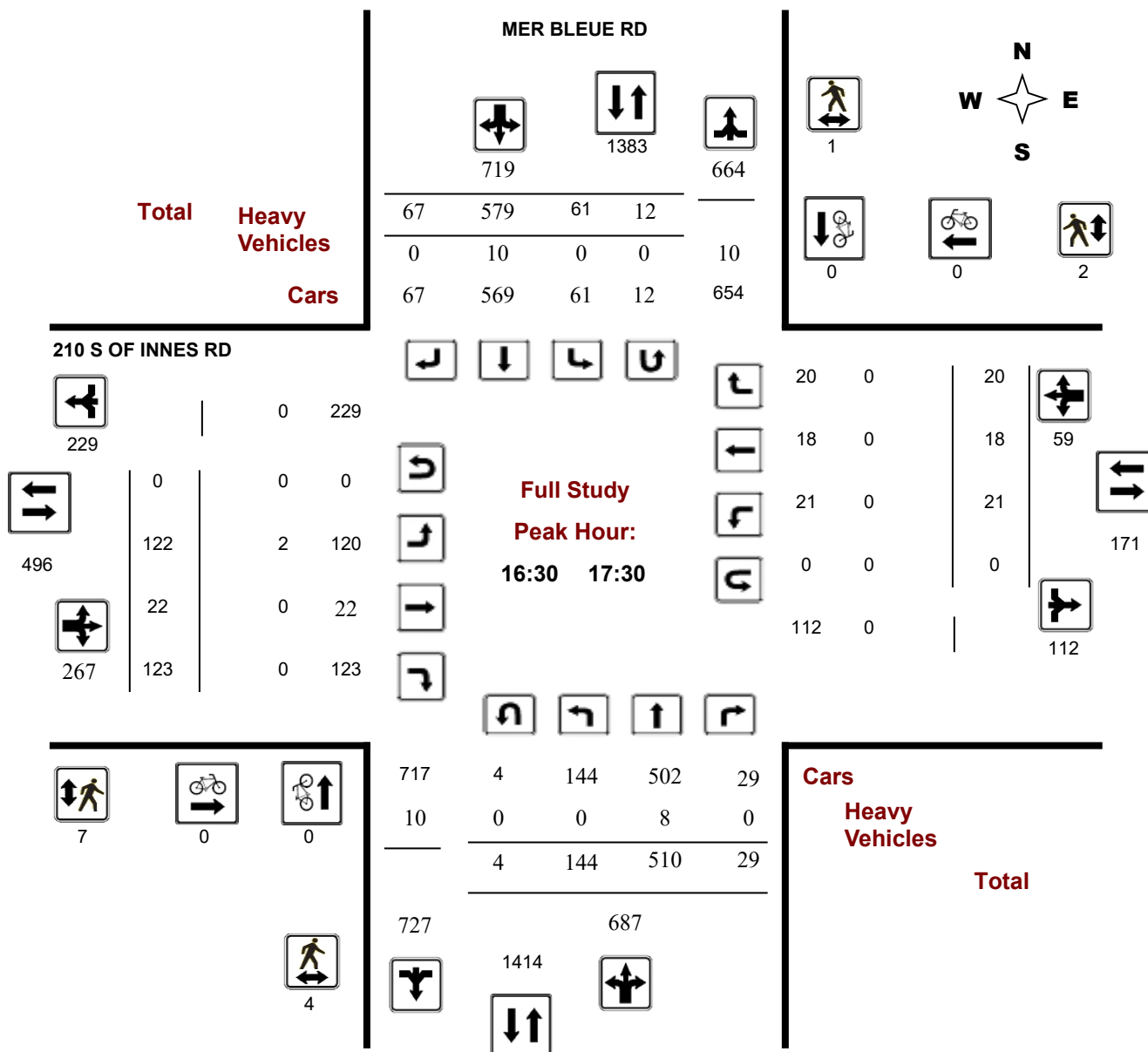
Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

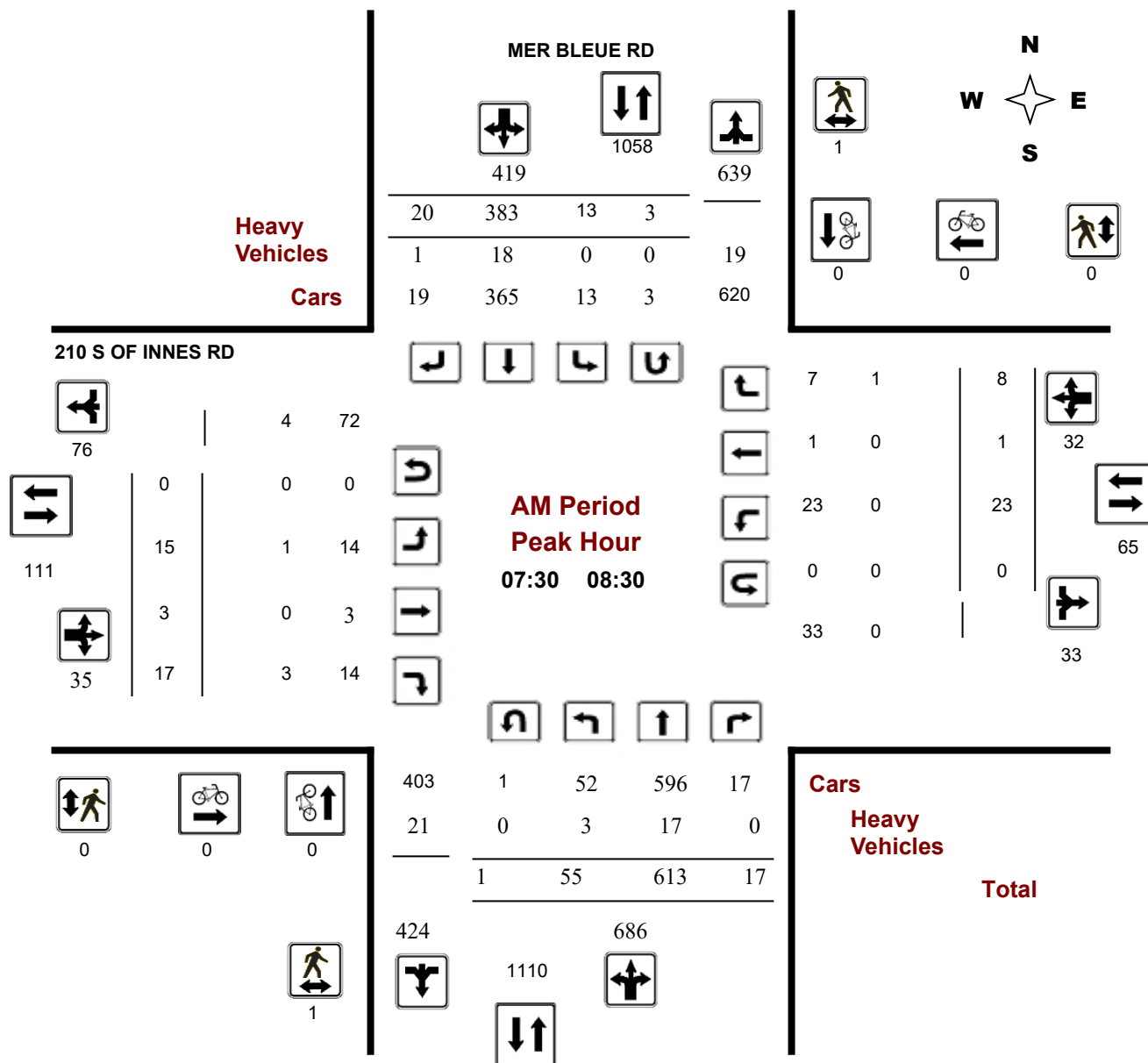
MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

Start Time: 07:00

WO No: 38272

Device: Miovision



Turning Movement Count - Peak Hour Diagram

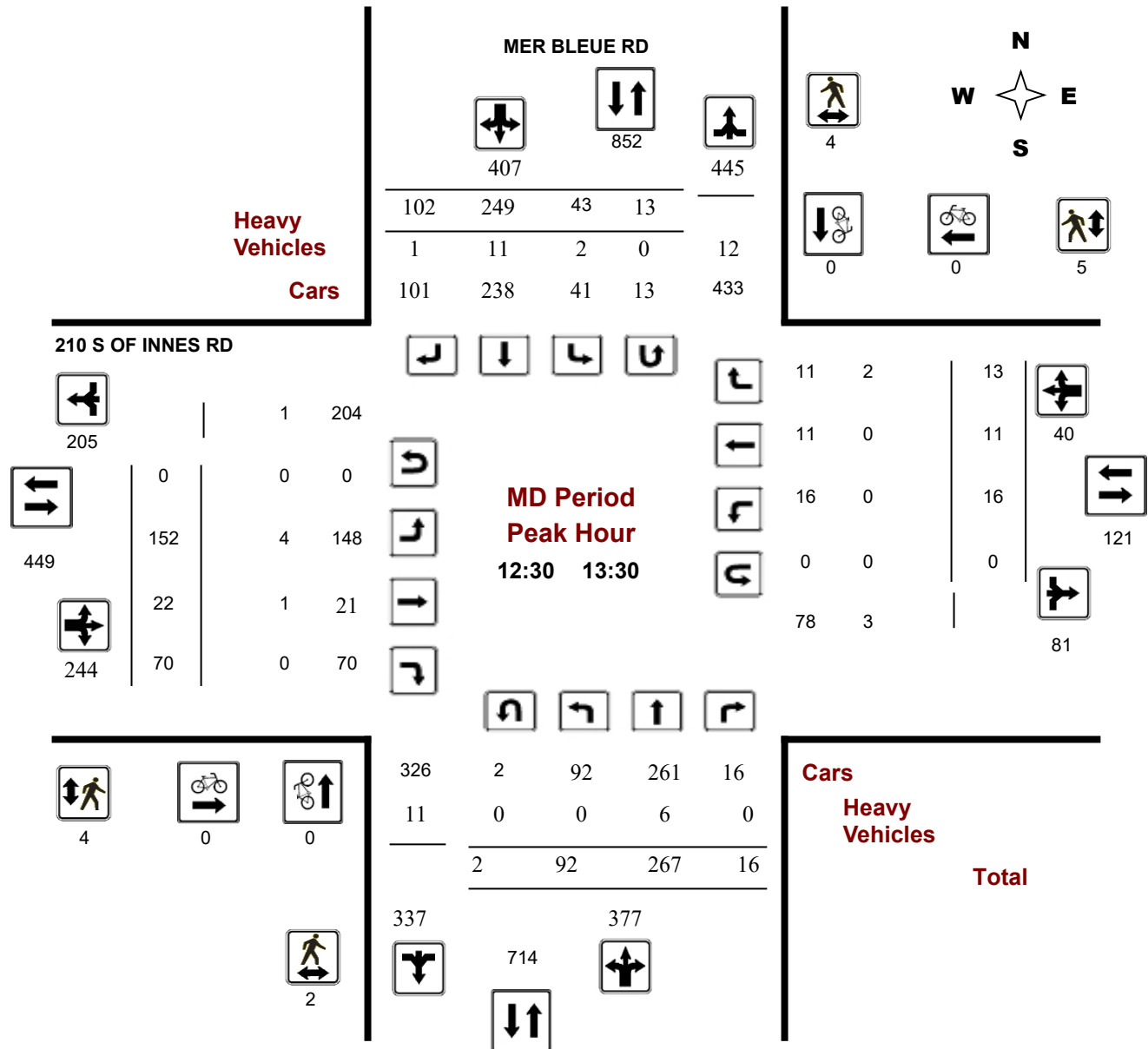
MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

Start Time: 07:00

WO No: 38272

Device: Miovision



Turning Movement Count - Peak Hour Diagram

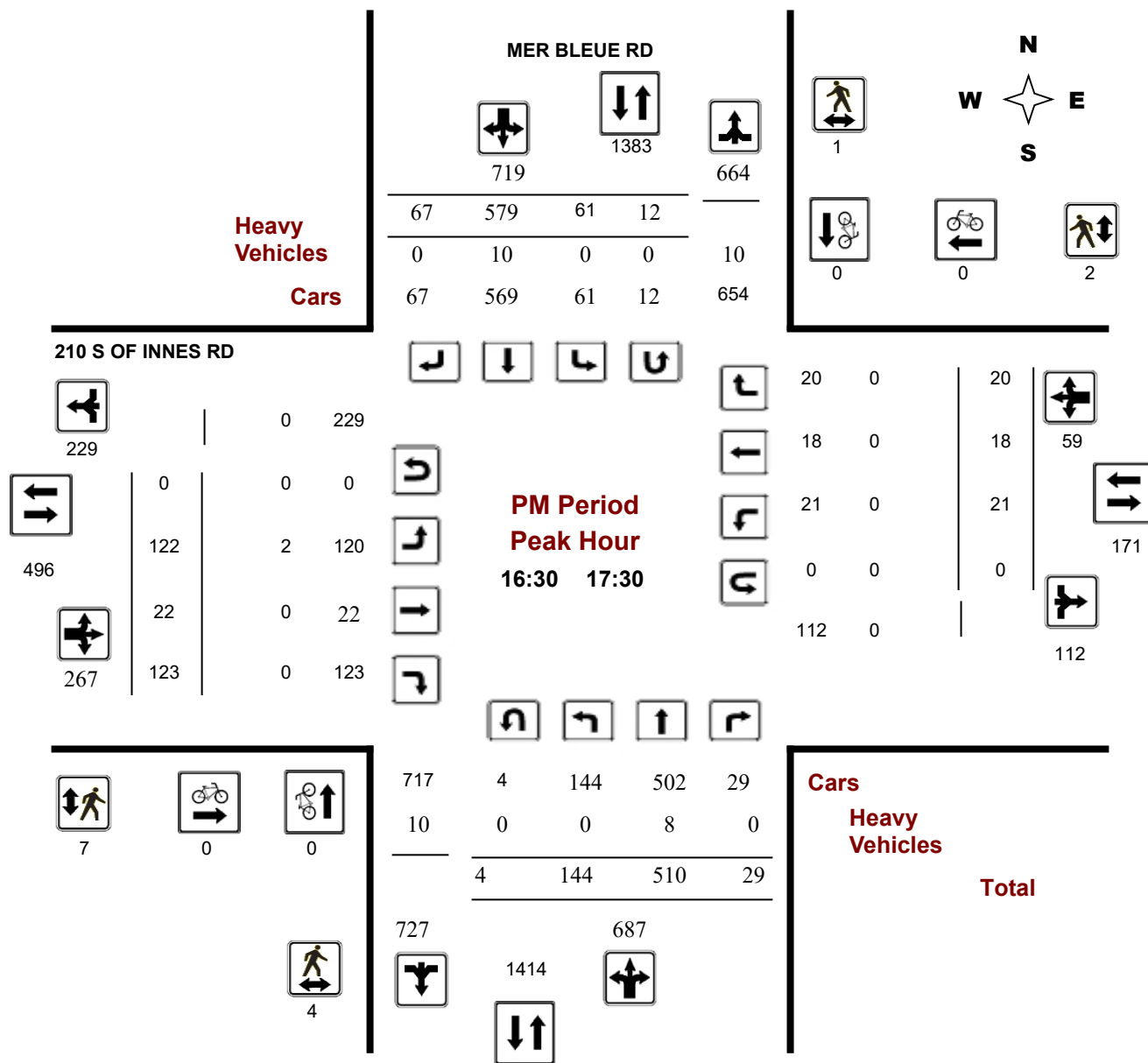
MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

Start Time: 07:00

WO No: 38272

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, January 15, 2019

Total Observed U-Turns

AADT Factor

Northbound: 15 Southbound: 79

1.10

Eastbound: 1 Westbound: 0

MER BLEUE RD

210 S OF INNES RD

		Northbound				Southbound				Eastbound				Westbound						Grand Total
Period		LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	
07:00	08:00	44	563	16	623	21	356	13	390	1013	10	2	16	28	25	1	2	28	56	1069
08:00	09:00	74	554	13	641	19	293	24	336	977	18	4	20	42	11	2	12	25	67	1044
09:00	10:00	69	339	8	416	28	207	52	287	703	46	5	24	75	10	4	10	24	99	802
11:30	12:30	96	267	18	381	34	256	89	379	760	157	13	63	233	14	10	11	35	268	1028
12:30	13:30	92	267	16	375	43	249	102	394	769	152	22	70	244	16	11	13	40	284	1053
15:00	16:00	141	397	21	559	47	480	86	613	1172	134	14	98	246	27	11	14	52	298	1470
16:00	17:00	134	467	26	627	52	533	69	654	1281	137	31	132	300	22	7	15	44	344	1625
17:00	18:00	137	521	32	690	59	562	73	694	1384	119	13	101	233	17	18	14	49	282	1666
Sub Total		787	3375	150	4312	303	2936	508	3747	8059	773	104	524	1401	142	64	91	297	1698	9757
U Turns		15			15	79			79	94	1			1	0			0	1	95
Total		802	3375	150	4327	382	2936	508	3826	8153	774	104	524	1402	142	64	91	297	1699	9852
EQ 12Hr		1115	4691	208	6014	531	4081	706	5318	11332	1076	145	728	1949	197	89	126	412	2361	13693
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39						
AVG 12Hr		1226	5160	229	6615	584	4489	777	5850	12465	1184	160	801	2145	217	98	139	454	2599	15064
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														1.10						
AVG 24Hr		1606	6760	300	8666	765	5881	1018	7664	16330	1551	210	1049	2810	284	128	182	594	3404	19734
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														1.31						
Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.																				



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

MER BLEUE RD

210 S OF INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15		111	3			52	0		183		0	4			1	0		11	194
07:15 07:30		133	4			91	2		247		0	3			0	0		9	256
07:30 07:45		151	3			116	7		290		1	3			0	1		15	305
07:45 08:00		168	6			97	4		296		1	6			0	1		21	317
08:00 08:15		148	4			86	5		265		0	6			0	4		14	279
08:15 08:30		146	4			84	4		254		1	2			1	2		17	271
08:30 08:45		132	2			68	9		238		1	6			0	2		17	255
08:45 09:00		128	3			55	6		223		2	6			1	4		19	242
09:00 09:15		106	0			54	9		195		0	4			3	0		19	214
09:15 09:30		91	3			56	14		193		2	4			0	2		25	218
09:30 09:45		78	2			44	18		161		2	6			0	4		26	187
09:45 10:00		64	3			53	11		163		1	10			1	4		29	192
11:30 11:45		64	4			61	22		189		4	16			3	6		69	258
11:45 12:00		67	2			59	23		188		3	22			2	1		75	263
12:00 12:15		73	7			79	18		215		3	12			2	3		69	284
12:15 12:30		63	5			57	26		182		3	13			3	1		55	237
12:30 12:45		62	2			61	24		189		5	19			3	3		62	251
12:45 13:00		72	5			63	23		204		6	20			2	1		80	284
13:00 13:15		67	6			58	23		186		6	16			3	6		74	260
13:15 13:30		66	3			67	32		205		5	15			3	3		68	273
15:00 15:15		88	6			110	18		266		3	17			2	4		64	330
15:15 15:30		104	3			123	24		299		2	26			4	3		67	366
15:30 15:45		104	6			107	26		302		5	18			4	3		80	382
15:45 16:00		101	6			140	18		319		4	37			1	4		88	407
16:00 16:15		130	7			114	26		318		10	33			1	1		85	403
16:15 16:30		106	5			127	11		296		8	32			1	6		88	384
16:30 16:45		117	6			167	16		373		5	29			1	5		76	449
16:45 17:00		114	8			125	16		309		8	38			4	3		95	404
17:00 17:15		131	6			138	16		354		7	29			9	8		90	444
17:15 17:30		148	9			149	19		370		2	27			4	4		65	435
17:30 17:45		124	10			141	20		352		1	20			4	1		62	414
17:45 18:00		118	7			134	18		329		3	25			1	1		65	394
Total:	0	3375	150	0	0	2936	508	0	8153	0	104	524	0	0	64	91	0	8153	9,852

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		MER BLEUE RD			210 S OF INNES RD			Grand Total
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

MER BLEUE RD

210 S OF INNES RD

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	2	0	2	0	0	0	2
07:15 07:30	0	0	0	1	0	1	1
07:30 07:45	0	1	1	0	0	0	1
07:45 08:00	0	0	0	0	0	0	0
08:00 08:15	1	0	1	0	0	0	1
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	1	0	1	0	0	0	1
08:45 09:00	0	1	1	0	1	1	2
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	1	0	1	1	0	1	2
09:30 09:45	0	0	0	1	0	1	1
09:45 10:00	1	0	1	0	0	0	1
11:30 11:45	1	1	2	1	1	2	4
11:45 12:00	2	0	2	0	3	3	5
12:00 12:15	1	3	4	3	1	4	8
12:15 12:30	1	1	2	1	1	2	4
12:30 12:45	0	0	0	1	0	1	1
12:45 13:00	2	0	2	0	2	2	4
13:00 13:15	0	0	0	1	0	1	1
13:15 13:30	0	4	4	2	3	5	9
15:00 15:15	1	1	2	1	1	2	4
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	1	0	1	0	0	0	1
15:45 16:00	0	1	1	1	1	2	3
16:00 16:15	0	0	0	1	0	1	1
16:15 16:30	0	1	1	1	1	2	3
16:30 16:45	1	0	1	3	1	4	5
16:45 17:00	2	0	2	0	0	0	2
17:00 17:15	1	1	2	3	1	4	6
17:15 17:30	0	0	0	1	0	1	1
17:30 17:45	0	0	0	3	1	4	4
17:45 18:00	0	2	2	0	0	0	2
Total	19	17	36	26	18	44	80



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

MER BLEUE RD

210 S OF INNES RD

Northbound

Southbound

Eastbound

Westbound

Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	0	4	1		0	2	0		7	1	0	1		0	0	0		2	9
07:15 07:30	0	6	0		1	0	1		8	0	0	0		0	0	0		0	8
07:30 07:45	0	3	0		0	4	0		7	0	0	0		0	0	0		0	7
07:45 08:00	3	7	0		0	7	0		17	0	0	1		0	0	0		1	18
08:00 08:15	0	3	0		0	4	1		8	1	0	2		0	0	1		4	12
08:15 08:30	0	4	0		0	3	0		7	0	0	0		0	0	0		0	7
08:30 08:45	1	5	0		0	9	0		15	0	0	0		0	0	0		0	15
08:45 09:00	1	5	0		0	1	0		7	0	0	0		0	0	0		0	7
09:00 09:15	1	1	0		3	4	0		9	2	0	1		0	0	0		3	12
09:15 09:30	0	2	0		0	1	0		3	1	0	0		0	0	0		1	4
09:30 09:45	0	1	0		1	2	0		4	0	1	0		0	0	0		1	5
09:45 10:00	0	2	0		2	0	0		4	0	0	0		0	1	1		2	6
11:30 11:45	0	5	0		0	2	0		7	1	0	1		0	0	1		3	10
11:45 12:00	0	1	0		0	1	1		3	0	0	0		0	0	0		0	3
12:00 12:15	1	2	0		0	3	0		6	0	0	0		0	0	0		0	6
12:15 12:30	0	0	0		1	2	0		3	0	0	0		0	0	0		0	3
12:30 12:45	0	2	0		0	4	0		6	1	1	0		0	0	0		2	8
12:45 13:00	0	1	0		0	1	0		2	1	0	0		0	0	0		1	3
13:00 13:15	0	1	0		0	1	0		2	1	0	0		0	0	1		2	4
13:15 13:30	0	2	0		2	5	1		10	1	0	0		0	0	1		2	12
15:00 15:15	1	6	1		0	2	1		11	1	0	0		0	0	0		1	12
15:15 15:30	0	3	0		0	3	0		6	0	0	1		0	0	0		1	7
15:30 15:45	1	5	0		0	1	0		7	0	0	0		0	0	0		0	7
15:45 16:00	0	4	0		1	5	0		10	0	0	0		0	0	0		0	10
16:00 16:15	0	3	0		0	4	0		7	0	0	0		0	0	0		0	7
16:15 16:30	0	2	0		0	2	0		4	0	0	0		0	0	1		1	5
16:30 16:45	0	3	0		0	4	0		7	1	0	0		0	0	0		1	8
16:45 17:00	0	3	0		0	1	0		4	0	0	0		0	0	0		0	4
17:00 17:15	0	1	0		0	3	0		4	0	0	0		0	0	0		0	4
17:15 17:30	0	1	0		0	2	0		3	1	0	0		0	0	0		1	4
17:30 17:45	0	1	0		0	3	0		4	0	0	0		0	0	0		0	5
17:45 18:00	0	2	0		0	1	0		3	0	0	0		0	0	0		0	3
Total: None	9	91	2	0	11	87	5	0	205	13	2	7	0	0	1	6	0	29	235



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MER BLEUE RD @ 210 S OF INNES RD

Survey Date: Tuesday, January 15, 2019

WO No: 38272

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

MER BLEUE RD

210 S OF INNES RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	1	0	0	0	1
07:30	07:45	0	1	0	0	1
07:45	08:00	0	1	0	0	1
08:00	08:15	1	0	0	0	1
08:15	08:30	0	1	0	0	1
08:30	08:45	0	0	0	0	0
08:45	09:00	0	1	0	0	1
09:00	09:15	0	4	0	0	4
09:15	09:30	1	1	0	0	2
09:30	09:45	0	0	0	0	0
09:45	10:00	1	2	0	0	3
11:30	11:45	0	6	0	0	6
11:45	12:00	0	2	0	0	2
12:00	12:15	1	4	0	0	5
12:15	12:30	1	0	0	0	1
12:30	12:45	0	4	0	0	4
12:45	13:00	2	3	0	0	5
13:00	13:15	0	1	0	0	1
13:15	13:30	0	5	0	0	5
15:00	15:15	0	7	0	0	7
15:15	15:30	0	3	0	0	3
15:30	15:45	0	2	1	0	3
15:45	16:00	0	2	0	0	2
16:00	16:15	1	2	0	0	3
16:15	16:30	1	1	0	0	2
16:30	16:45	1	3	0	0	4
16:45	17:00	2	4	0	0	6
17:00	17:15	1	3	0	0	4
17:15	17:30	0	2	0	0	2
17:30	17:45	1	7	0	0	8
17:45	18:00	0	7	0	0	7
Total		15	79	1	0	95

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

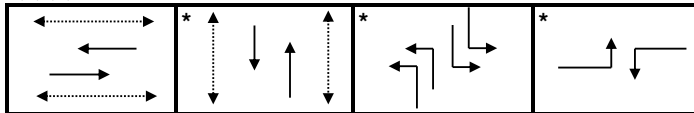
Intersection:	<i>Main:</i> Innes	<i>Side:</i> Jeanne d'Arc / Mer Bleue
Controller:	MS 3200	TSD: 5907
Author:	Hamadoun Issabre	Date: 18-Dec-2024

Existing Timing Plans†

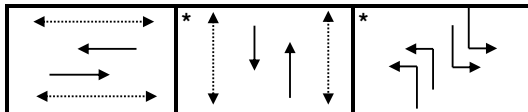
	Plan						Ped Minimum Time		
	Post AM 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	AM Peak 11	Walk	DW	A+R
	Cycle	110	110	130	90	130			
Offset	0	0	0	X	0	0			
EB Thru	52	41	59	41	49	62	7	20	3.7+2.7
WB Thru	52	41	59	41	49	62	7	20	3.7+2.7
NB Thru	31	31	31	31	31	31	7	17	3.7+2.5
SB Thru	31	31	31	31	31	31	7	17	3.7+2.5
NB Left (fp)	15	25	23	18	23	15	-	-	3.7+2.6
SB Left (fp)	15	25	23	18	23	15	-	-	3.7+2.6
EB Left	12	13	17	-	27	12	-	-	3.7+2.4
WB Left	12	13	17	-	27	12	-	-	3.7+2.4

Phasing Sequence‡

Plan: 1,2,3,5,11



Plan: 4



Schedule

Weekday		Saturday		Sunday	
Time	Plan	Time	Plan	Time	Plan
0:15	4	0:10	4	0:10	4
6:00	11	7:00	2	7:00	2
9:00	1	9:00	5	9:00	5
9:30	2	17:00	2	17:00	2
15:00	3	20:00	4	19:00	4
18:30	2				
22:00	4				

Notes

†: Time for each direction includes amber and all red intervals
‡: Start of first phase should be used as reference point for offset
Asterisk (*) Indicates actuated phase
(fp): Fully Protected Left Turn
◄.....► Pedestrian signal

Cost is \$62.38 (\$55.20 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

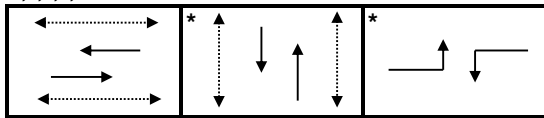
Intersection:	Main: Innes	Side: Wildflower / Noella Leclair
Controller:	ATC 3	TSD: 6600
Author:	Hamadoun Issabre	Date: 18-Dec-2024

Existing Timing Plans†

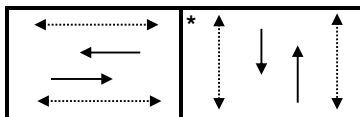
	Plan						Ped Minimum Time		
	Late AM 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	AM Peak 11	Walk	DW	A+R
Cycle	110	110	130	70	130	120			
Offset	73	9	109	X	28	73			
EB Thru	67	67	85	38	87	77	15	16	3.7+2.5
WB Thru	67	67	85	38	87	77	15	16	3.7+2.5
NB Thru	32	32	32	32	32	32	7	18	3.0+3.7
SB Thru	32	32	32	32	32	32	7	18	3.0+3.7
EB Left	11	11	13	-	11	11	-	-	3.7+2.2
WB Left	11	11	13	-	11	11	-	-	3.7+2.2

Phasing Sequence‡

Plan: 1,2,3,5,11



Plan: 4



Schedule

Weekday		Saturday		Sunday	
Time	Plan	Time	Plan	Time	Plan
0:10	4	0:10	4	0:10	4
6:00	11	7:00	2	7:00	2
9:00	1	9:00	5	10:00	5
9:30	2	19:00	2	18:00	2
15:00	3	20:00	4	19:00	4
18:30	2				
22:00	4				

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄.....► Pedestrian signal

Cost is \$62.38 (\$55.20 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

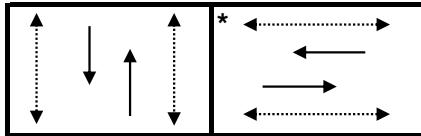
Intersection:	<i>Main:</i> Mer Bleue	<i>Side:</i> Roger Pharand
Controller:	MS 3200	TSD: 6698
Author:	Hamadoun Issabre	Date: 18-Dec-2024

Existing Timing Plans[†]

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
Cycle	90	80	90	75	80			
Offset	90	80	90	X	X			
NB Thru	49	39	49	34	39	7	19	3.7+2.7
SB Thru	49	39	49	34	39	7	19	3.7+2.7
EB Thru	41	41	41	41	41	7	27	3.3+3.5
WB Thru	41	41	41	41	41	7	27	3.3+3.5

Phasing Sequence[‡]

Plan: All



Schedule

Weekday

Time	Plan
0:10	4
6:30	1
9:30	2
15:00	3
18:30	2
22:00	4

Saturday

Time	Plan
0:10	4
7:00	2
9:00	5
19:00	2
20:00	4

Sunday

Time	Plan
0:10	4
7:00	2
10:00	5
18:00	2
19:00	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄.....► Pedestrian signal

Cost is \$62.38 (\$55.20 + HST)

APPENDIX B – COLLISION DATA



X	Y	ID	Geo_ID	Accid	Accident Date	Accident Location	Location	Classification Of	Initial Impact	Type	Road Surf	Environm	Light	Traffic Control	Num of V	Num Of F	Num of B	Num of M	Max Injury	Num of In	Num of M	Num of M	Num of F	X	Y	Coord	Lat	Long
-8405024	5693275	2018-24056	12453		10/20/2018	7:52:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	02 - Non-fatal injur	02 - Angle	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0			02 - Minor	2		2		382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2018-26831	12453		12/23/2018	12:27:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	03 - P.D. only	05 - Turning movement	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0								382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2019-30878	12453		2/5/2019	6:02:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	03 - P.D. only	04 - Sideswipe	02 - Wet	02 - Rain	07 - Dark	01 - Traffic signal	2	0								382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2019-35268	12453		6/9/2019	13:06:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0								382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2019-40525	12453		10/31/2019	16:03:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	03 - P.D. only	02 - Angle	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	2	0								382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2019-43023	12453		12/22/2019	18:15:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	02 - Non-fatal injur	05 - Turning movement	02 - Wet	01 - Clear	07 - Dark	01 - Traffic signal	2	0			02 - Minor	1		1		382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2020-47424	12453		2/15/2020	9:31:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection	02 - Non-fatal injur	02 - Angle	02 - Wet	01 - Clear	01 - Daylight	01 - Traffic signal	2	0			02 - Minor	1		1		382731.3	5035376	45.45397	-75.5036	
-8405024	5693275	2020-50114	12453		6/27/2020	15:30:00	MER BLUE RD @ 210 S OF INNES RD (0012453)	Intersection																				

-8405153	5693550	2019-35055	12475		6/3/2019	13:00:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	02 - Non-fatal injur	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0			02 - Minor	1					382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-36595	12475		7/17/2019	6:56:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0									382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-36257	12475		7/6/2019	20:16:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	4	0									382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-37814	12475		8/19/2019	18:55:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	04 - Sideswipe	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0									382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-37365	12475		8/8/2019	13:47:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0									382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-37474	12475		8/9/2019	11:30:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0									382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-37695	12475		8/17/2019	16:30:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	02 - Non-fatal injur	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0			01 - Minim	1	1				382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2019-38726	12475		9/16/2019	21:01:00	INNES RD @ JEANNE D'ARC BLVD/MER BLEUE RD (0012475)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	07 - Dark	01 - Traffic signal	2	0									382637.8	5035568	45.4557	-75.5048
-8405153	5																											

-8405153	5693550	2022--71108	12475	8/19/2022	17:14:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.9	5035567	45.4557	-75.5048
-8405154	5693549	2022--71119	12475	8/21/2022	19:00:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	05 - Turning movement	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.3	5035567	45.4557	-75.5048
-8405153	5693550	2022--71910	12475	9/25/2022	11:15:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2022--72718	12475	10/31/2022	13:17:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.8	5035567	45.4557	-75.5048
-8405155	5693550	2022--72970	12475	11/3/2022	13:30:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382636.5	5035568	45.4557	-75.5048
-8405153	5693550	2022--72515	12475	10/19/2022	12:10:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	03 - Rear end	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2022--72036	12475	9/30/2022	12:56:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	02 - Angle	01 - Dry	01 - Clear	01 - Daylight	01 - Traffic signal	2	0										382637.8	5035568	45.4557	-75.5048
-8405153	5693550	2022--73528	12475	11/30/2022	9:45:00	INNES DR @ JEANNE D'ARC BLVD/MER BLEUE DR (0012475)	Intersection	03 - P.D. only	05 - Turning movement	02 - Wet	02 - Rain	01 - Daylight	01 - Traffic signal	2	0										382637.8	5035568	45.4557	-75.5048
-8404726	5693720	2018--20035	12871	6/17/2018	7:02:00	INNES DR @ WILDFLOWER DR (0012871)	Intersection																					

APPENDIX C – TRANSPORTATION DEMAND MANAGEMENT CHECKLIST



TDM-Supportive Development Design and Infrastructure Checklist: *Non-Residential Developments (office, institutional, retail or industrial)*

Legend	
REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

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

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

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

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

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

TDM Measures Checklist:

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

Legend	
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

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

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

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

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

APPENDIX D – MMLOS ANALYSIS



Multi-Modal Level of Service - Segments Form

Project: 2025 Mer Bleue Road

Consultant: Stantec

Date: Jan 6, 2025

Scenario: Existing_Innes Road Section

Segment Name		STREET A				
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)				
Segment Component Side of Street		Majority (>50%)		Critical		
		W or N	E or S	W or N	E or S	
Pedestrian	PLOS Inputs					
	Posted Speed (km/h)	60 km/h		60 km/h		
	Two-Way ADT	31,000		31,000		
	Pedestrian Facility	Sidewalk	Sidewalk	Sidewalk		
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes	Yes		
	Facility Width (m)	2.20m	2.20m	1.90m		
	Offset from Motor Vehicle Travel Lanes (m)	1.5-2.99m	≥ 3.0m	1.5-2.99m		
	Presence of Adjacent Parking?	-	No	-		
	General Purpose Curb Lane ADT	> 3000	-	≤ 3000		
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m	≤ 200m		
	PLOS	B	A	B	-	
	Target PLOS	B				
Bicycle	BLOS Inputs					
	Cycling Route Classification	Cross-Town Bikeway				
	Cycling Facility	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Input PLOS First	
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	No	No	No		
	Facility Operation	-	-	-		
	Pedestrian/Cyclist Volume	-	-	-		
	Facility Width	≥ 2.0m	≥ 2.0m	≥ 2.0m		
	Boulevard/Buffer Width (excluding curb)	-	-	-		
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None		
	Number of Travel Lanes at Crossing	-	-	-		
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-		
	Cross-street Posted Speed (km/h)	-	-	-		
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare	Rare		
		BLOS	D	D	D	-
		Target BLOS	B			
Transit	TLOS Inputs					
	Transit Facility	Mixed Traffic				
	Facility Type	Mixed Traffic	Mixed Traffic			
	Transit Travel Speed (Mixed Traffic Only)	50 km/h	50 km/h			
		TLOS	C	C		
	Target TLOS	where corridors connect to rapid transit				
Public Realm	PRLOS Inputs					
	Context	Other Streets	Other Streets			
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m			
	Middle Boulevard Width	1.5-1.99m	≥ 3.0m			
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m			
	Transit Route on Segment?	Yes	Yes			
	Bus Stop Elements	Curbside platform with no shelter	Curbside platform with no shelter			
	Number of Midblock Traffic Lanes (both travel directions)	4				
	Design Speed (km/h)	70 km/h				
	PRLOS	C	C			

Multi-Modal Level of Service - Segments Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Existing _MerBleue Road

Segment Name		STREET A			
OP Transect / Policy Area		Outer Urban or Suburban			
Segment Component		Majority (>50%)		Critical	
Side of Street		W or N	E or S	W or N	E or S
Pedestrian	PLOS Inputs				
	Posted Speed (km/h)	60 km/h		60 km/h	
	Two-Way ADT	16,000		16,000	
	Pedestrian Facility	Sidewalk	Sidewalk		
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes		
	Facility Width (m)	2.20m	2.20m		
	Offset from Motor Vehicle Travel Lanes (m)	1.5-2.99m	≥ 3.0m		
	Presence of Adjacent Parking?	-	No		
	General Purpose Curb Lane ADT	> 3000	-		
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m		
PLOS	B	A	-	-	
Target PLOS	C				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Elsewhere			
	Cycling Facility	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Input PLOS First	Input PLOS First
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	No	No		
	Facility Operation	-	-		
	Pedestrian/Cyclist Volume	-	-		
	Facility Width	1.5-1.99m	1.5-1.99m		
	Boulevard/Buffer Width (excluding curb)	-	-		
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None		
	Number of Travel Lanes at Crossing	-	-		
	Crossing includes Median Refuge (≥ 2.7m)	-	-		
	Cross-street Posted Speed (km/h)	-	-		
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare		
	BLOS	D	D	-	-
	Target BLOS	C			
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Facility Type	Mixed Traffic	Mixed Traffic		
	Transit Travel Speed (Mixed Traffic Only)	50 km/h	50 km/h		
	TLOS	C	C		
	Target TLOS	E			
Public Realm	PRLOS Inputs				
	Context	Other Streets	Other Streets		
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m		
	Middle Boulevard Width	≤ 0.5m	≤ 0.5m		
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m		
	Transit Route on Segment?	Yes	Yes		
	Bus Stop Elements	No platform or shelter	Curbside platform with no shelter		
	Number of Midblock Traffic Lanes (both travel directions)	4			
	Design Speed (km/h)	70 km/h			
	PRLOS	C	C		
	C				

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Existing _Innes & MerBleue Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	8	8	7	7
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Std Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel
	Right-Turn Signal Phasing	-	-	-	-
	Right-Turn Volume	> 300 veh/h	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	-	-	-	-
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Fully Protected	Fully Protected	Fully Protected	Fully Protected
	Left-Turn Volume	-	-	-	-
	Left-Turn Opposing Lanes	-	-	-	-
	Score	0.70	0.80	1.35	1.35
PLOS	E	E	E	E	
	E				
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	16,000		31,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Dual Left-Turn Lanes	General Purpose Dual Left-Turn Lanes
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	-	-
	Score	0	0	0	0
	BLOS	F	F	F	F
F					
Target BLOS	B				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	21-35 sec	36-55 sec	11-20 sec	56-80 sec
	Example Transit Priority Treatment	-	-	-	-
	TLOS	C	D	B	E
		C			
Target TLOS	E (LoS D where corridors connect to rapid transit stations)				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90			
	AutoLOS	D			
	Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)			

Multi-Modal Level of Service - Intersections Form

Project: 2025 Mer Bleue Road

Consultant: Stantec

Date: Jan 6, 2025

Scenario: Existing _Innes & WildFlower Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	1-3	1-3	5	5
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h
	Left-Turn Opposing Lanes	-	-	-	-
Score	3.75	3.75	2.75	2.75	
PLOS	B	B	C	C	
	C				
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	1,000		31,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	One Lane Crossed	One Lane Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed
	Score	10	10	0	0
	BLOS	F	F	F	F
		F			
	Target BLOS	B			
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	Unavailable	Unavailable	56-80 sec	11-20 sec
	Example Transit Priority Treatment			-	-
	TLOS	-	-	E	B
		C			
	Target TLOS	E (LoS D where corridors connect to rapid transit stations)			
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	AutoLOS	A			
	Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)			

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Existing _MerBleue & Roger Pharand Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Outer Urban or Suburban			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	6	6	1-3	1-3
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	76-90			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 100 veh/h	≤ 50 veh/h	> 50 to 100 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	-	-	≤ 1	-
	Score	2.55	2.75	4.25	4.05
PLOS	C	C	B	B	
	C				
Target PLOS	C				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Elsewhere			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Crossride	Crossride
	Two-Way ADT on Adjacent Roadway	16,000		3,500	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	One Lane Crossed	One Lane Crossed
	Score	-40	0	60	20
	BLOS	F	F	D	E
	F				
Target BLOS	C				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	11-20 sec	11-20 sec	Unavailable	Unavailable
	Example Transit Priority Treatment	-	-		
	TLOS	B	B	-	-
		B			
Target TLOS	E				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	AutoLOS	A			
	Target AutoLOS	E			

Multi-Modal Level of Service - Segments Form

Project: 2025 Mer Bleue Road
Consultant: Stantec
Date: Jan 6, 2025
Scenario: 2031 _Innes Road Section

Segment Name		STREET A				
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)				
Segment Component Side of Street		Majority (>50%)		Critical		
		W or N	E or S	W or N	E or S	
Pedestrian	PLOS Inputs					
	Posted Speed (km/h)	60 km/h		60 km/h		
	Two-Way ADT	35,000		35,000		
	Pedestrian Facility	Sidewalk	Sidewalk	Sidewalk		
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes	Yes		
	Facility Width (m)	2.20m	2.20m	1.90m		
	Offset from Motor Vehicle Travel Lanes (m)	1.5-2.99m	≥ 3.0m	1.5-2.99m		
	Presence of Adjacent Parking?	-	No	-		
	General Purpose Curb Lane ADT	> 3000	-	≤ 3000		
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m	≤ 200m		
	PLOS	B	A	B	-	
	Target PLOS	B				
Bicycle	BLOS Inputs					
	Cycling Route Classification	Cross-Town Bikeway				
	Cycling Facility	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Input PLOS First	
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	No	No	No		
	Facility Operation	-	-	-		
	Pedestrian/Cyclist Volume	-	-	-		
	Facility Width	≥ 2.0m	≥ 2.0m	≥ 2.0m		
	Boulevard/Buffer Width (excluding curb)	-	-	-		
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None		
	Number of Travel Lanes at Crossing	-	-	-		
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-		
	Cross-street Posted Speed (km/h)	-	-	-		
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare	Rare		
		BLOS	D	D	D	-
		Target BLOS	B			
Transit	TLOS Inputs					
	Transit Facility	Mixed Traffic				
	Facility Type	Mixed Traffic	Mixed Traffic			
	Transit Travel Speed (Mixed Traffic Only)	50 km/h	50 km/h			
	TLOS	C	C			
Target TLOS	where corridors connect to rapid transit					
Public Realm	PRLOS Inputs					
	Context	Other Streets	Other Streets			
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m			
	Middle Boulevard Width	1.5-1.99m	≥ 3.0m			
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m			
	Transit Route on Segment?	Yes	Yes			
	Bus Stop Elements	Curbside platform with no shelter	Curbside platform with no shelter			
	Number of Midblock Traffic Lanes (both travel directions)	4				
	Design Speed (km/h)	70 km/h				
		PRLOS	C	C		
		C				

Multi-Modal Level of Service - Segments Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

2031_MerBleue Road

Segment Name		STREET A				
OP Transect / Policy Area		Outer Urban or Suburban				
Segment Component		Majority (>50%)		Critical		
Side of Street		W or N	E or S	W or N	E or S	
Pedestrian	PLOS Inputs					
	Posted Speed (km/h)	60 km/h		60 km/h		
	Two-Way ADT	18,000		18,000		
	Pedestrian Facility	Sidewalk	Sidewalk			
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (≤ 20%)?	Yes	Yes			
	Facility Width (m)	2.20m	2.20m			
	Offset from Motor Vehicle Travel Lanes (m)	1.5-2.99m	≥ 3.0m			
	Presence of Adjacent Parking?	-	No			
	General Purpose Curb Lane ADT	> 3000	-			
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m			
	PLOS	B	A	-	-	
	Target PLOS	C				
Bicycle	BLOS Inputs					
	Cycling Route Classification	Elsewhere				
	Cycling Facility	Paved Shoulder without Buffer	Paved Shoulder without Buffer	Input PLOS First	Input PLOS First	
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	No	No			
	Facility Operation	-	-			
	Pedestrian/Cyclist Volume	-	-			
	Facility Width	1.5-1.99m	1.5-1.99m			
	Boulevard/Buffer Width (excluding curb)	-	-			
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None			
	Number of Travel Lanes at Crossing	-	-			
	Crossing includes Median Refuge (≥ 2.7m)	-	-			
	Cross-street Posted Speed (km/h)	-	-			
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare			
		BLOS	D	D	-	-
		Target BLOS	C			
Transit	TLOS Inputs					
	Transit Facility	Mixed Traffic				
	Facility Type	Mixed Traffic	Mixed Traffic			
	Transit Travel Speed (Mixed Traffic Only)	50 km/h	50 km/h			
	TLOS	C	C			
	Target TLOS	E				
Public Realm	PRLOS Inputs					
	Context	Other Streets	Other Streets			
	Inner Boulevard Width	≤ 0.6m	≤ 0.6m			
	Middle Boulevard Width	≤ 0.5m	≥ 3.0m			
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m			
	Transit Route on Segment?	Yes	Yes			
	Bus Stop Elements	No platform or shelter	Curbside platform with no shelter			
	Number of Midblock Traffic Lanes (both travel directions)	4				
	Design Speed (km/h)	70 km/h				
		PRLOS	C	C		
		C				

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Background 2031_Innes & MerBleue Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	8	8	7	7
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Std Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel
	Right-Turn Signal Phasing	-	-	-	-
	Right-Turn Volume	> 300 veh/h	> 150 to 300 veh/h	> 150 to 300 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	-	-	-	-
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Fully Protected	Fully Protected	Fully Protected	Fully Protected
	Left-Turn Volume	-	-	-	-
	Left-Turn Opposing Lanes	-	-	-	-
	Score	0.70	0.80	1.35	1.35
	PLOS	E	E	E	E
E					
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	18,000		35,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Dual Left-Turn Lanes	General Purpose Dual Left-Turn Lanes
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	-	-
	Score	0	0	0	0
	BLOS	F	F	F	F
		F			
Target BLOS	B				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	56-80 sec	36-55 sec	11-20 sec	> 80 sec
	Example Transit Priority Treatment	-	-	-	-
	TLOS	E	D	B	F
		D			
Target TLOS	E (LoS D where corridors connect to rapid transit stations)				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90			
	AutoLOS	D			
	Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)			

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Background 2031_Innes & WildFlower Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	1-3	1-3	5	5
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 50 to 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h
	Left-Turn Opposing Lanes	≤ 1	-	-	-
Score	3.75	3.75	2.75	2.75	
PLOS	B	B	C	C	
	C				
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	2,000		35,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	One Lane Crossed	One Lane Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed
	Score	10	10	0	0
	BLOS	F	F	F	F
F					
Target BLOS	B				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	Unavailable	Unavailable	21-35 sec	56-80 sec
	Example Transit Priority Treatment			-	-
	TLOS	-	-	C	E
		D			
Target TLOS	E (LoS D where corridors connect to rapid transit stations)				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0.91 to 1.00			
	AutoLOS	E			
Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)				

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Background 2031 - MerBleue & Roger Pharand Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Outer Urban or Suburban			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	6	6	1-3	1-3
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	76-90			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	≤ 50 veh/h	> 100 veh/h	> 100 veh/h	> 50 to 100 veh/h
	Left-Turn Opposing Lanes	-	-	≤ 1	
	Score	2.75	2.40	-	-
	PLOS	C	D	-	-
C					
Target PLOS	C				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Elsewhere			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Crossride	Crossride
	Two-Way ADT on Adjacent Roadway	18,000		4,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	One Lane Crossed	One Lane Crossed
	Score	0	-40	Input PLOS First	Input PLOS First
	BLOS	F	F	-	-
		-			
Target BLOS	C				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	11-20 sec	11-20 sec	Unavailable	Unavailable
	Example Transit Priority Treatment	-	-		
	TLOS	B	B	-	-
		B			
Target TLOS	E				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	AutoLOS	A			
	Target AutoLOS	E			

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Total 2031_Innes & MerBleue Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	8	8	7	7
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Std Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel	Conventional Right-Turn Channel
	Right-Turn Signal Phasing	-	-	-	-
	Right-Turn Volume	> 300 veh/h	> 150 to 300 veh/h	> 150 to 300 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	-	-	-	-
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Fully Protected	Fully Protected	Fully Protected	Fully Protected
	Left-Turn Volume	-	-	-	-
	Left-Turn Opposing Lanes	-	-	-	-
	Score	0.70	0.80	1.35	1.35
PLOS	E	E	E	E	
	E				
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	18,000		35,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Dual Left-Turn Lanes	General Purpose Dual Left-Turn Lanes
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	-	-
	Score	0	0	0	0
	BLOS	F	F	F	F
F					
Target BLOS	B				
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	> 80 sec	56-80 sec	11-20 sec	> 80 sec
	Example Transit Priority Treatment	-	-	-	-
	TLOS	F	E	B	F
		E			
Target TLOS	E (LoS D where corridors connect to rapid transit stations)				
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90			
	AutoLOS	D			
	Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)			

Multi-Modal Level of Service - Intersections Form

Project: 2025 Mer Bleue Road

Consultant: Stantec

Date: Jan 6, 2025

Scenario: Total2031_Innes & WildFlower Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Mainstreet Corridor (outside a Hub)			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	1-3	1-3	5	5
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	106-120			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 50 to 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h
	Left-Turn Opposing Lanes	≤ 1	-	-	-
Score	3.75	3.75	2.75	2.75	
PLOS	B	B	C	C	
	C				
Target PLOS	B				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT on Adjacent Roadway	2,000		35,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	One Lane Crossed	One Lane Crossed	Two or More Lanes Crossed	Two or More Lanes Crossed
	Score	10	10	0	0
	BLOS	F	F	F	F
		F			
	Target BLOS	B			
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	Unavailable	Unavailable	21-35 sec	56-80 sec
	Example Transit Priority Treatment			-	-
	TLOS	-	-	C	E
		D			
	Target TLOS	E (LoS D where corridors connect to rapid transit stations)			
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0.91 to 1.00			
	AutoLOS	E			
	Target AutoLOS	E (LoS D where corridors connect to rapid transit stations)			

Multi-Modal Level of Service - Intersections Form

Project:

2025 Mer Bleue Road

Consultant:

Stantec

Date:

Jan 6, 2025

Scenario:

Total2031_MerBleue & Roger Pharand Intersection

Intersection Name		INTERSECTION A			
OP Transect / Policy Area		Outer Urban or Suburban			
Pedestrian	PLOS Inputs				
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	6	6	1-3	1-3
	Median Refuge (>2.7m)	No	No	No	No
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings
	Signal Cycle Length (sec)	76-90			
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	60 km/h		60 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	≤ 50 veh/h	> 100 veh/h	> 50 to 100 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	-	-	≤ 1	-
	Score	2.75	2.40	4.25	4.05
	PLOS	C	D	B	B
Target PLOS	C				
Bicycle	BLOS Inputs				
	Cycling Route Classification	Elsewhere			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Crossride	Crossride
	Two-Way ADT on Adjacent Roadway	18,000		4,000	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	Yes	Yes	Yes	Yes
	Crossride Operation	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	Two or More Lanes Crossed	Two or More Lanes Crossed	One Lane Crossed	One Lane Crossed
	Score	0	-40	60	20
	BLOS	F	F	D	E
	Target BLOS	C			
Transit	TLOS Inputs				
	Transit Facility	Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay	11-20 sec	11-20 sec	Unavailable	Unavailable
	Example Transit Priority Treatment	-	-		
	TLOS	B	B	-	-
	Target TLOS	E			
Auto	AutoLOS Inputs				
	Overall Intersection Volume to Capacity Ratio	0 to 0.60			
	AutoLOS	A			
	Target AutoLOS	E			

APPENDIX E – SYNCHRO ANALYSIS OUTPUT REPORTS



Existing 2025_AM
3: Mer-Bleue Road & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	340	67	198	1324	606	116	350	74	148	148	54
Future Volume (vph)	36	340	67	198	1324	606	116	350	74	148	148	54
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	3288	3302	0	3288	3255	0
Flt Permitted	0.072			0.512			0.950			0.950		
Satd. Flow (perm)	128	3390	1517	914	3390	1517	3288	3302	0	3288	3255	0
Satd. Flow (RTOR)			138			392		19			39	
Lane Group Flow (vph)	40	378	74	220	1471	673	129	471	0	164	224	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	12.0	62.0	62.0	12.0	62.0	62.0	15.0	31.0		15.0	31.0	
Total Split (%)	10.0%	51.7%	51.7%	10.0%	51.7%	51.7%	12.5%	25.8%		12.5%	25.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	62.2	55.6	55.6	62.2	55.6	55.6	8.9	24.8		8.9	24.8	
Actuated g/C Ratio	0.52	0.46	0.46	0.52	0.46	0.46	0.07	0.21		0.07	0.21	
v/c Ratio	0.27	0.24	0.10	0.43	0.94	0.74	0.53	0.68		0.67	0.32	
Control Delay	16.5	20.0	0.2	3.4	20.5	11.4	62.0	47.6		68.6	34.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.5	20.0	0.2	3.4	20.5	11.4	62.0	47.6		68.6	34.6	
LOS	B	B	A	A	C	B	E	D		E	C	
Approach Delay		16.7			16.3			50.7			48.9	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	4.0	27.6	0.0	10.1	195.2	107.4	15.3	52.1		19.7	19.4	
Queue Length 95th (m)	8.9	37.8	0.0	m8.6	m143.4	m62.7	25.4	70.2		#32.6	31.0	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	146	1570	776	513	1570	913	243	697		243	703	
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	0.27	0.24	0.10	0.43	0.94	0.74	0.53	0.68		0.67	0.32	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 25.0

Intersection LOS: C

Intersection Capacity Utilization 80.5%

ICU Level of Service D

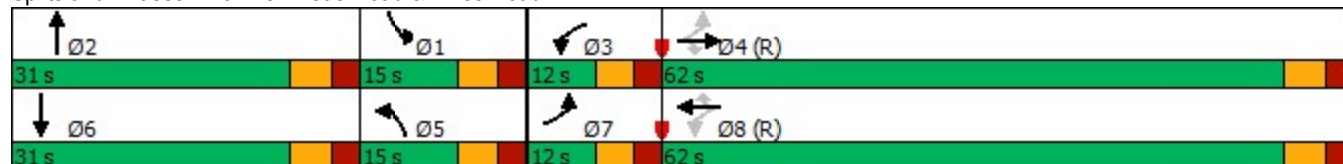
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



Existing 2025_AM
6: Noella Leclair Way & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	588	0	14	2047	11	0	0	3	14	0	81
Future Volume (vph)	12	588	0	14	2047	11	0	0	3	14	0	81
Satd. Flow (prot)	1695	3390	0	1695	3387	0	1784	1517	0	1695	1517	0
Flt Permitted	0.056			0.373						0.756		
Satd. Flow (perm)	100	3390	0	666	3387	0	1784	1517	0	1349	1517	0
Satd. Flow (RTOR)					1			314			83	
Lane Group Flow (vph)	13	653	0	16	2286	0	0	3	0	16	90	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	77.0		11.0	77.0		32.0	32.0		32.0	32.0	
Total Split (%)	9.2%	64.2%		9.2%	64.2%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	76.2	70.8		76.2	70.8			25.3		25.3	25.3	
Actuated g/C Ratio	0.64	0.59		0.64	0.59			0.21		0.21	0.21	
v/c Ratio	0.10	0.33		0.03	1.14			0.01		0.06	0.23	
Control Delay	12.6	15.9		6.4	96.7			0.0		38.6	11.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	12.6	15.9		6.4	96.7			0.0		38.6	11.4	
LOS	B	B		A	F			A		D	B	
Approach Delay		15.8			96.1						15.5	
Approach LOS		B			F						B	
Queue Length 50th (m)	1.0	36.5		1.1	~333.0			0.0		3.0	1.3	
Queue Length 95th (m)	m3.2	49.6		3.3	#374.7			0.0		9.1	14.8	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	131	2000		466	1998			567		284	385	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.10	0.33		0.03	1.14			0.01		0.06	0.23	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 73 (61%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 145

Control Type: Pretimed

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 75.9

Intersection LOS: E

Intersection Capacity Utilization 79.2%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

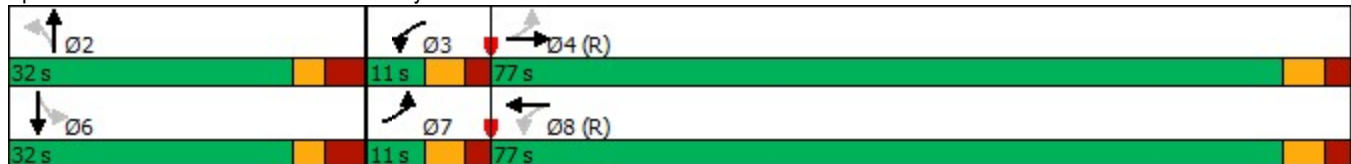
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	17	26	1	2	46	592	17	22	374	14
Future Volume (vph)	11	2	17	26	1	2	46	592	17	22	374	14
Satd. Flow (prot)	1695	1542	0	1695	1606	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.756			0.744			0.506			0.356		
Satd. Flow (perm)	1349	1542	0	1328	1606	0	903	3390	1517	635	3390	1517
Satd. Flow (RTOR)		19			2				46			46
Lane Group Flow (vph)	12	21	0	29	3	0	51	658	19	24	416	16
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		54.4%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	34.2	34.2		34.2	34.2		42.6	42.6	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.02	0.04		0.06	0.00		0.12	0.41	0.03	0.08	0.26	0.02
Control Delay	17.8	8.6		18.2	14.0		14.3	16.5	0.9	14.0	14.8	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	8.6		18.2	14.0		14.3	16.5	0.9	14.0	14.8	0.3
LOS	B	A		B	B		B	B	A	B	B	A
Approach Delay		11.9			17.8			15.9			14.2	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	1.3	0.2		3.1	0.1		4.7	37.6	0.0	2.2	21.8	0.0
Queue Length 95th (m)	4.7	4.7		8.6	1.8		11.3	50.8	1.1	6.7	31.1	0.5
Internal Link Dist (m)		88.9			147.8			100.3			64.3	
Turn Bay Length (m)	45.0			40.0			85.0		85.0	85.0		85.0
Base Capacity (vph)	512	597		504	611		427	1604	742	300	1604	742
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	0.02	0.04		0.06	0.00		0.12	0.41	0.03	0.08	0.26	0.02
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Pretimed												
Maximum v/c Ratio: 0.41												
Intersection Signal Delay: 15.2						Intersection LOS: B						
Intersection Capacity Utilization 50.3%						ICU Level of Service A						
Analysis Period (min) 15												

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Existing 2025_AM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	0	0	0	0	0	0	0	0	0	0	29
Future Volume (vph)	41	0	0	0	0	0	0	0	0	0	0	29
Satd. Flow (prot)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Lane Group Flow (vph)	0	46	0	0	0	0	0	0	0	0	32	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 13.3% ICU Level of Service A												
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	12	0	2128	0	50
Future Volume (vph)	550	12	0	2128	0	50
Satd. Flow (prot)	3380	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3380	0	0	3390	0	1543
Lane Group Flow (vph)	624	0	0	2364	0	56
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 65.4%				ICU Level of Service C		
Analysis Period (min) 15						

Existing 2025_AM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	0	0	14
Future Volume (vph)	3	0	0	0	0	14
Satd. Flow (prot)	1695	0	0	1784	1543	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1543	0
Lane Group Flow (vph)	3	0	0	0	16	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	50	3	0	12
Future Volume (vph)	0	0	50	3	0	12
Satd. Flow (prot)	1784	0	1772	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1772	0	0	1784
Lane Group Flow (vph)	0	0	59	0	0	13
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 6.7%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	12	0	0	12	0
Future Volume (vph)	53	12	0	0	12	0
Satd. Flow (prot)	1674	0	0	1784	1784	0
Flt Permitted	0.961					
Satd. Flow (perm)	1674	0	0	1784	1784	0
Lane Group Flow (vph)	72	0	0	0	13	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 13.9%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	0	540	65	0	413
Future Volume (vph)	0	0	540	65	0	413
Satd. Flow (prot)	0	1784	3390	1517	0	3390
Flt Permitted						
Satd. Flow (perm)	0	1784	3390	1517	0	3390
Lane Group Flow (vph)	0	0	600	72	0	459
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 19.1%			ICU Level of Service A			
Analysis Period (min) 15						

Existing 2025_PM
3: Mer-Bleue Road & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	1306	143	175	881	369	170	270	255	444	453	98
Future Volume (vph)	140	1306	143	175	881	369	170	270	255	444	453	98
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	3288	3143	0	3288	3299	0
Flt Permitted	0.156			0.076			0.950			0.950		
Satd. Flow (perm)	278	3390	1517	136	3390	1517	3288	3143	0	3288	3299	0
Satd. Flow (RTOR)			159			410		156			18	
Lane Group Flow (vph)	156	1451	159	194	979	410	189	583	0	493	612	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	17.0	59.0	59.0	17.0	59.0	59.0	23.0	31.0		23.0	31.0	
Total Split (%)	13.1%	45.4%	45.4%	13.1%	45.4%	45.4%	17.7%	23.8%		17.7%	23.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	64.2	52.6	52.6	64.2	52.6	52.6	16.9	24.8		16.9	24.8	
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.40	0.40	0.13	0.19		0.13	0.19	
v/c Ratio	0.60	1.06	0.22	0.97	0.71	0.48	0.44	0.80		1.15	0.95	
Control Delay	26.0	79.0	4.4	99.4	18.6	2.0	55.9	46.0		142.3	75.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	26.0	79.0	4.4	99.4	18.6	2.0	55.9	46.0		142.3	75.9	
LOS	C	E	A	F	B	A	E	D		F	E	
Approach Delay		67.6			24.2			48.4			105.6	
Approach LOS		E			C			D			F	
Queue Length 50th (m)	19.5	~214.3	0.0	37.9	45.8	0.1	23.3	56.5		~76.5	80.2	
Queue Length 95th (m)	31.5	#256.8	13.1	m#67.5	77.6	12.8	35.3	78.1		#110.6	#116.2	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	258	1371	708	200	1371	857	427	725		427	643	
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	0.60	1.06	0.22	0.97	0.71	0.48	0.44	0.80		1.15	0.95	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 59.6

Intersection LOS: E

Intersection Capacity Utilization 98.7%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

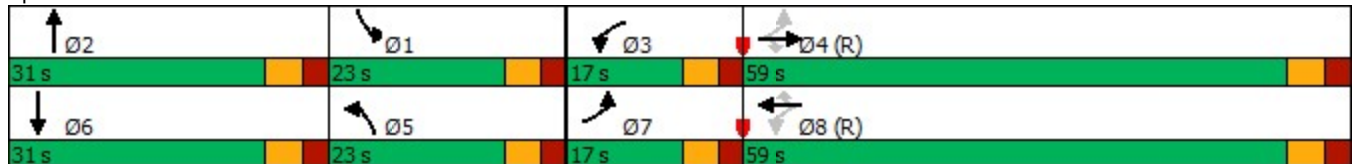
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	2003	2	5	1394	36	0	1	28	23	2	31
Future Volume (vph)	50	2003	2	5	1394	36	0	1	28	23	2	31
Satd. Flow (prot)	1695	3390	0	1695	3377	0	1784	1526	0	1695	1531	0
Flt Permitted	0.082			0.051						0.736		
Satd. Flow (perm)	146	3390	0	91	3377	0	1784	1526	0	1313	1531	0
Satd. Flow (RTOR)					4			31			34	
Lane Group Flow (vph)	56	2228	0	6	1589	0	0	32	0	26	36	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	13.0	85.0		13.0	85.0		32.0	32.0		32.0	32.0	
Total Split (%)	10.0%	65.4%		10.0%	65.4%		24.6%	24.6%		24.6%	24.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	86.2	78.8		86.2	78.8			25.3		25.3	25.3	
Actuated g/C Ratio	0.66	0.61		0.66	0.61			0.19		0.19	0.19	
v/c Ratio	0.31	1.08		0.04	0.78			0.10		0.10	0.11	
Control Delay	8.8	59.3		6.2	22.4			15.4		44.4	15.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	8.8	59.3		6.2	22.4			15.4		44.4	15.5	
LOS	A	E		A	C			B		D	B	
Approach Delay		58.0			22.3			15.4			27.6	
Approach LOS		E			C			B			C	
Queue Length 50th (m)	3.8	~331.0		0.4	150.3			0.2		5.5	0.4	
Queue Length 95th (m)	m3.5	m#297.8		1.6	180.1			9.0		13.8	9.7	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	181	2054		147	2048			321		255	325	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.31	1.08		0.04	0.78			0.10		0.10	0.11	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 109 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 145

Control Type: Pretimed

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 42.9

Intersection LOS: D

Intersection Capacity Utilization 77.6%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

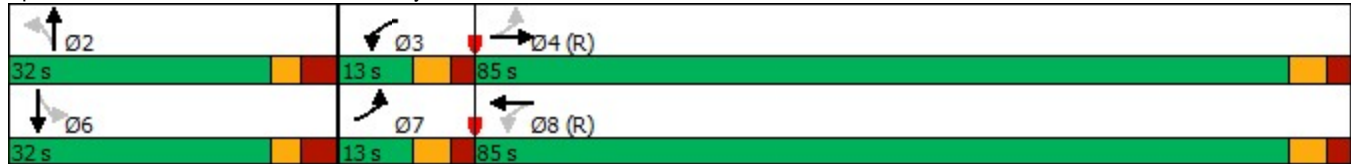
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	144	33	139	23	7	16	141	491	27	55	643	73
Future Volume (vph)	144	33	139	23	7	16	141	491	27	55	643	73
Satd. Flow (prot)	1695	1568	0	1695	1599	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.740			0.637			0.326			0.421		
Satd. Flow (perm)	1320	1568	0	1137	1599	0	582	3390	1517	751	3390	1517
Satd. Flow (RTOR)		150			18				46			81
Lane Group Flow (vph)	160	191	0	26	26	0	157	546	30	61	714	81
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		54.4%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	34.2	34.2		34.2	34.2		42.6	42.6	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.32	0.28		0.06	0.04		0.57	0.34	0.04	0.17	0.45	0.11
Control Delay	21.9	6.5		18.3	10.1		27.2	15.6	2.4	15.3	16.9	3.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	6.5		18.3	10.1		27.2	15.6	2.4	15.3	16.9	3.6
LOS	C	A		B	B		C	B	A	B	B	A
Approach Delay		13.6			14.2			17.6			15.6	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	19.1	4.4		2.8	0.8		18.8	29.9	0.0	5.8	41.6	0.0
Queue Length 95th (m)	34.5	17.7		8.0	5.8		40.6	41.3	2.9	13.5	55.8	7.1
Internal Link Dist (m)		88.9			147.8			100.3			64.3	
Turn Bay Length (m)	45.0			40.0			85.0		85.0	85.0		85.0
Base Capacity (vph)	501	688		432	618		275	1604	742	355	1604	760
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	0.32	0.28		0.06	0.04		0.57	0.34	0.04	0.17	0.45	0.11
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Pretimed												
Maximum v/c Ratio: 0.57												
Intersection Signal Delay: 15.9						Intersection LOS: B						
Intersection Capacity Utilization 63.6%						ICU Level of Service B						
Analysis Period (min) 15												

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Existing 2025_PM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Flt Permitted												
Satd. Flow (perm)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free		Free				Stop				Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 0.0%						ICU Level of Service A						
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2005	0	0	1425	0	50
Future Volume (vph)	2005	0	0	1425	0	50
Satd. Flow (prot)	3390	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3390	0	0	3390	0	1543
Lane Group Flow (vph)	2228	0	0	1583	0	56
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 68.5%				ICU Level of Service C		
Analysis Period (min) 15						

Existing 2025_PM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	0	0	0	0	9
Future Volume (vph)	29	0	0	0	0	9
Satd. Flow (prot)	1695	0	0	1784	1543	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1543	0
Lane Group Flow (vph)	32	0	0	0	10	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	1784	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1784	0	0	1784
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%			ICU Level of Service A			
Analysis Period (min) 15						

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	0	1784	1784	0
Flt Permitted						
Satd. Flow (perm)	1784	0	0	1784	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	44	651	0	0	771
Future Volume (vph)	0	44	651	0	0	771
Satd. Flow (prot)	0	1543	3390	1784	0	3390
Flt Permitted						
Satd. Flow (perm)	0	1543	3390	1784	0	3390
Lane Group Flow (vph)	0	49	723	0	0	857
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 29.0%			ICU Level of Service A			
Analysis Period (min) 15						

Background 2026_AM
3: Mer-Bleue Road & Innes Road

04/15/2025

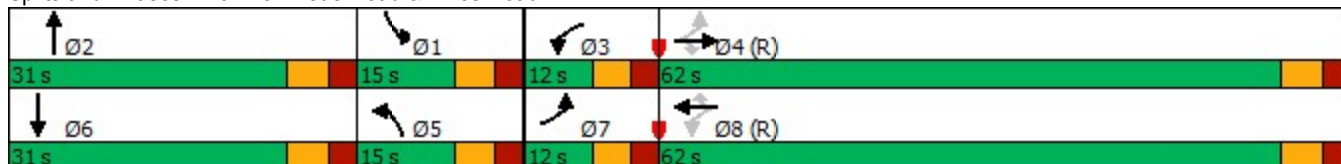
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	351	69	204	1367	626	120	361	76	153	153	56
Future Volume (vph)	37	351	69	204	1367	626	120	361	76	153	153	56
Satd. Flow (prot)	1647	3293	1473	1647	3293	1473	3195	3208	0	3195	3162	0
Flt Permitted	0.072			0.532			0.950			0.950		
Satd. Flow (perm)	125	3293	1473	922	3293	1473	3195	3208	0	3195	3162	0
Satd. Flow (RTOR)			138			408		19			39	
Lane Group Flow (vph)	37	351	69	204	1367	626	120	437	0	153	209	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	12.0	62.0	62.0	12.0	62.0	62.0	15.0	31.0		15.0	31.0	
Total Split (%)	10.0%	51.7%	51.7%	10.0%	51.7%	51.7%	12.5%	25.8%		12.5%	25.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	62.2	55.6	55.6	62.2	55.6	55.6	8.9	24.8		8.9	24.8	
Actuated g/C Ratio	0.52	0.46	0.46	0.52	0.46	0.46	0.07	0.21		0.07	0.21	
v/c Ratio	0.26	0.23	0.09	0.40	0.90	0.69	0.51	0.64		0.65	0.31	
Control Delay	16.3	19.8	0.2	3.3	19.1	9.8	61.5	46.6		67.4	34.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	19.8	0.2	3.3	19.1	9.8	61.5	46.6		67.4	34.0	
LOS	B	B	A	A	B	A	E	D		E	C	
Approach Delay		16.6			15.0			49.8			48.1	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	3.7	25.4	0.0	9.4	181.6	81.5	14.2	47.8		18.4	17.7	
Queue Length 95th (m)	8.5	35.3	0.0	m8.4	m142.7	m58.8	24.0	65.2		#29.5	28.8	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	142	1525	756	514	1525	901	236	678		236	684	
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									

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



Background 2026_AM
6: Noella Leclair Way & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	607	0	14	2113	11	0	0	3	14	0	84
Future Volume (vph)	12	607	0	14	2113	11	0	0	3	14	0	84
Satd. Flow (prot)	1662	3325	0	1662	3322	0	1820	1547	0	1729	1547	0
Flt Permitted	0.056			0.396						0.756		
Satd. Flow (perm)	98	3325	0	693	3322	0	1820	1547	0	1376	1547	0
Satd. Flow (RTOR)					1			340			83	
Lane Group Flow (vph)	12	607	0	14	2124	0	0	3	0	14	84	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	77.0		11.0	77.0		32.0	32.0		32.0	32.0	
Total Split (%)	9.2%	64.2%		9.2%	64.2%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	76.2	70.8		76.2	70.8			25.3		25.3	25.3	
Actuated g/C Ratio	0.64	0.59		0.64	0.59			0.21		0.21	0.21	
v/c Ratio	0.09	0.31		0.03	1.08			0.01		0.05	0.21	
Control Delay	12.5	15.3		6.4	72.4			0.0		38.5	9.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	12.5	15.3		6.4	72.4			0.0		38.5	9.8	
LOS	B	B		A	E			A		D	A	
Approach Delay		15.2			72.0						13.9	
Approach LOS		B			E						B	
Queue Length 50th (m)	0.9	33.2		1.0	~295.6			0.0		2.7	0.2	
Queue Length 95th (m)	m3.0	46.1		3.0	#337.8			0.0		8.3	13.1	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	128	1961		481	1960			594		290	391	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.09	0.31		0.03	1.08			0.01		0.05	0.21	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 73 (61%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 135

Control Type: Pretimed

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 57.6

Intersection LOS: E

Intersection Capacity Utilization 81.1%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

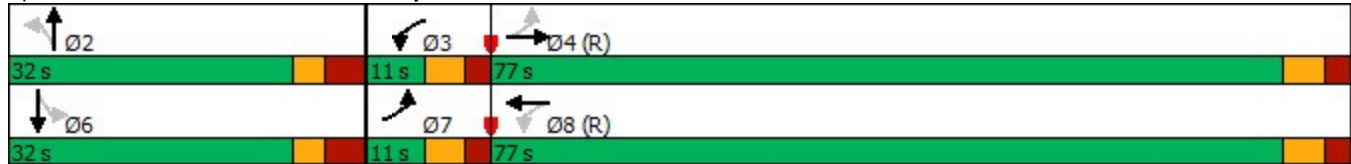
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	18	27	1	2	47	611	18	23	386	14
Future Volume (vph)	11	2	18	27	1	2	47	611	18	23	386	14
Satd. Flow (prot)	1729	1574	0	1729	1638	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.756			0.744			0.523			0.382		
Satd. Flow (perm)	1376	1574	0	1354	1638	0	933	3390	1517	682	3390	1517
Satd. Flow (RTOR)		18			2				46			46
Lane Group Flow (vph)	11	20	0	27	3	0	47	611	18	23	386	14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		54.4%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	34.2	34.2		34.2	34.2		42.6	42.6	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.02	0.03		0.05	0.00		0.11	0.38	0.02	0.07	0.24	0.02
Control Delay	17.7	8.8		18.1	14.0		14.1	16.1	0.8	13.8	14.6	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	8.8		18.1	14.0		14.1	16.1	0.8	13.8	14.6	0.1
LOS	B	A		B	B		B	B	A	B	B	A
Approach Delay		11.9			17.7			15.6			14.1	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	1.2	0.2		2.9	0.1		4.3	34.3	0.0	2.1	20.0	0.0
Queue Length 95th (m)	4.4	4.5		8.1	1.8		10.4	46.6	0.9	6.4	29.0	0.2
Internal Link Dist (m)		88.9			147.8			100.3			64.3	
Turn Bay Length (m)	45.0			40.0			85.0		85.0	85.0		85.0
Base Capacity (vph)	522	609		514	623		441	1604	742	322	1604	742
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	0.02	0.03		0.05								

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Background 2026_AM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	0	0	0	0	0	0	0	0	0	0	30
Future Volume (vph)	42	0	0	0	0	0	0	0	0	0	0	30
Satd. Flow (prot)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Lane Group Flow (vph)	0	42	0	0	0	0	0	0	0	0	30	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 13.3% ICU Level of Service A												
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		 
Traffic Volume (vph)	568	12	0	2197	0	52
Future Volume (vph)	568	12	0	2197	0	52
Satd. Flow (prot)	3380	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3380	0	0	3390	0	1543
Lane Group Flow (vph)	580	0	0	2197	0	52
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 67.4%				ICU Level of Service C		
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	0	0	14
Future Volume (vph)	3	0	0	0	0	14
Satd. Flow (prot)	1695	0	0	1784	1514	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1514	0
Lane Group Flow (vph)	3	0	0	0	14	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	52	3	0	12
Future Volume (vph)	0	0	52	3	0	12
Satd. Flow (prot)	1784	0	1772	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1772	0	0	1784
Lane Group Flow (vph)	0	0	55	0	0	12
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 6.7%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	12	0	0	12	0
Future Volume (vph)	55	12	0	0	12	0
Satd. Flow (prot)	1674	0	0	1784	1784	0
Flt Permitted	0.961					
Satd. Flow (perm)	1674	0	0	1784	1784	0
Lane Group Flow (vph)	67	0	0	0	12	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 14.0%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	0	557	67	0	426
Future Volume (vph)	0	0	557	67	0	426
Satd. Flow (prot)	0	1784	3390	1517	0	3390
Fit Permitted						
Satd. Flow (perm)	0	1784	3390	1517	0	3390
Lane Group Flow (vph)	0	0	557	67	0	426
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 19.6%			ICU Level of Service A			
Analysis Period (min) 15						

Background 2026_PM
3: Mer-Bleue Road & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1348	148	181	909	381	175	279	263	458	468	101
Future Volume (vph)	145	1348	148	181	909	381	175	279	263	458	468	101
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	3288	3143	0	3288	3299	0
Flt Permitted	0.185			0.076			0.950			0.950		
Satd. Flow (perm)	330	3390	1517	136	3390	1517	3288	3143	0	3288	3299	0
Satd. Flow (RTOR)			148			381		159			17	
Lane Group Flow (vph)	145	1348	148	181	909	381	175	542	0	458	569	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	17.0	59.0	59.0	17.0	59.0	59.0	23.0	31.0		23.0	31.0	
Total Split (%)	13.1%	45.4%	45.4%	13.1%	45.4%	45.4%	17.7%	23.8%		17.7%	23.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	64.2	52.6	52.6	64.2	52.6	52.6	16.9	24.8		16.9	24.8	
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.40	0.40	0.13	0.19		0.13	0.19	
v/c Ratio	0.52	0.98	0.21	0.91	0.66	0.45	0.41	0.74		1.07	0.88	
Control Delay	22.4	59.0	4.5	89.0	16.9	1.5	55.2	41.8		117.1	66.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.4	59.0	4.5	89.0	16.9	1.5	55.2	41.8		117.1	66.2	
LOS	C	E	A	F	B	A	E	D		F	E	
Approach Delay		50.8			21.8			45.0			88.9	
Approach LOS		D			C			D			F	
Queue Length 50th (m)	18.1	177.5	0.0	34.3	40.6	0.0	21.5	49.7		~67.0	73.4	
Queue Length 95th (m)	29.4	#227.7	12.7	m#68.0	51.6	4.6	33					

~ Volume exceeds capacity, queue is theoretically infinite.

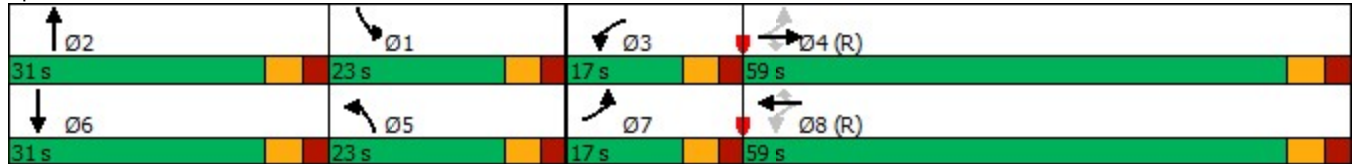
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



Background 2026_PM
6: Noella Leclair Way & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	2068	2	5	1439	37	0	1	29	24	2	32
Future Volume (vph)	52	2068	2	5	1439	37	0	1	29	24	2	32
Satd. Flow (prot)	1695	3390	0	1695	3377	0	1820	1556	0	1729	1563	0
Flt Permitted	0.104			0.051						0.738		
Satd. Flow (perm)	186	3390	0	91	3377	0	1820	1556	0	1343	1563	0
Satd. Flow (RTOR)					4			29			32	
Lane Group Flow (vph)	52	2070	0	5	1476	0	0	30	0	24	34	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	13.0	85.0		13.0	85.0		32.0	32.0		32.0	32.0	
Total Split (%)	10.0%	65.4%		10.0%	65.4%		24.6%	24.6%		24.6%	24.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	86.2	78.8		86.2	78.8			25.3		25.3	25.3	
Actuated g/C Ratio	0.66	0.61		0.66	0.61			0.19		0.19	0.19	
v/c Ratio	0.25	1.01		0.03	0.72			0.09		0.09	0.10	
Control Delay	7.3	32.0		6.2	20.4			15.6		44.2	15.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.3	32.0		6.2	20.4			15.6		44.2	15.6	
LOS	A	C		A	C			B		D	B	
Approach Delay		31.4			20.4			15.6			27.5	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	3.4	~154.8		0.4	131.3			0.2		5.1	0.4	
Queue Length 95th (m)	m3.6	m#161.5		1.5	157.4			8.6		12.9	9.4	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	205	2054		147	2048			326		261	329	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.25	1.01		0.03	0.72			0.09		0.09	0.10	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 109 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 125

Control Type: Pretimed

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 26.8

Intersection LOS: C

Intersection Capacity Utilization 79.5%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

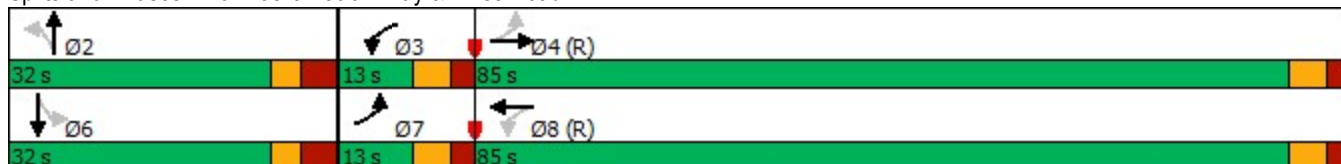
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	34	143	24	7	17	146	507	28	57	664	75
Future Volume (vph)	149	34	143	24	7	17	146	507	28	57	664	75
Satd. Flow (prot)	1729	1600	0	1729	1627	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.742			0.646			0.352			0.445		
Satd. Flow (perm)	1350	1600	0	1176	1627	0	628	3390	1517	794	3390	1517
Satd. Flow (RTOR)		143			17				46			75
Lane Group Flow (vph)	149	177	0	24	24	0	146	507	28	57	664	75
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		54.4%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	34.2	34.2		34.2	34.2		42.6	42.6	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.29	0.25		0.05	0.04		0.49	0.32	0.04	0.15	0.41	0.10
Control Delay	21.4	6.2		18.2	10.1		23.4	15.4	2.1	14.9	16.5	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	21.4	6.2		18.2	10.1		23.4	15.4	2.1	14.9	16.5	3.7
LOS	C	A		B	B		C	B	A	B	B	A
Approach Delay		13.2			14.2			16.5			15.2	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	17.6	3.7		2.6	0.7		16.6	27.4	0.0	5.4	38.0	0.0
Queue Length 95th (m)	32.0	16.3		7.6	5.5		35.2	38.2	2.6	12.6	51.3	6.8
Internal Link Dist (m)		88.9			147.8			100.3				

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Background 2026_PM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Flt Permitted												
Satd. Flow (perm)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free				Free				Stop			
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 0.0%					ICU Level of Service A							
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2070	0	0	1471	0	52
Future Volume (vph)	2070	0	0	1471	0	52
Satd. Flow (prot)	3390	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3390	0	0	3390	0	1543
Lane Group Flow (vph)	2070	0	0	1471	0	52
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 70.5%				ICU Level of Service C		
Analysis Period (min) 15						

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	0	0	0	0	9
Future Volume (vph)	30	0	0	0	0	9
Satd. Flow (prot)	1695	0	0	1784	1543	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1543	0
Lane Group Flow (vph)	30	0	0	0	9	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	1784	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1784	0	0	1784
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%			ICU Level of Service A			
Analysis Period (min) 15						

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	0	1784	1784	0
Flt Permitted						
Satd. Flow (perm)	1784	0	0	1784	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	45	672	0	0	796
Future Volume (vph)	0	45	672	0	0	796
Satd. Flow (prot)	0	1543	3390	1784	0	3390
Fit Permitted						
Satd. Flow (perm)	0	1543	3390	1784	0	3390
Lane Group Flow (vph)	0	45	672	0	0	796
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 29.6%			ICU Level of Service A			
Analysis Period (min) 15						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	365	76	204	1367	626	125	376	76	153	174	56
Future Volume (vph)	37	365	76	204	1367	626	125	376	76	153	174	56
Satd. Flow (prot)	1647	3293	1473	1647	3293	1473	3195	3211	0	3195	3171	0
Flt Permitted	0.072			0.522			0.950			0.950		
Satd. Flow (perm)	125	3293	1473	905	3293	1473	3195	3211	0	3195	3171	0
Satd. Flow (RTOR)			138			401		18			33	
Lane Group Flow (vph)	37	365	76	204	1367	626	125	452	0	153	230	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	12.0	62.0	62.0	12.0	62.0	62.0	15.0	31.0		15.0	31.0	
Total Split (%)	10.0%	51.7%	51.7%	10.0%	51.7%	51.7%	12.5%	25.8%		12.5%	25.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	62.2	55.6	55.6	62.2	55.6	55.6	8.9	24.8		8.9	24.8	
Actuated g/C Ratio	0.52	0.46	0.46	0.52	0.46	0.46	0.07	0.21		0.07	0.21	
v/c Ratio	0.26	0.24	0.10	0.40	0.90	0.70	0.53	0.67		0.65	0.34	
Control Delay	16.3	20.0	0.3	3.4	19.1	9.9	62.2	47.5		67.4	36.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	20.0	0.3	3.4	19.1	9.9	62.2	47.5		67.4	36.2	
LOS	B	B	A	A	B	A	E	D		E	D	
Approach Delay		16.6			15.1			50.7			48.7	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	3.7	26.6	0.0	9.4	181.4	82.4	14.8	49.8		18.4	20.7	
Queue Length 95th (m)	8.5	36.7	0.3	m8.5	m143.2	m59.7	24.7	67.8		#29.5	32.6	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	142	1525	756	506	1525	897	236	677		236	681	
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	0.26	0.24	0.10	0.40	0.90	0.70	0.53	0.67		0.65	0.34	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 24.5

Intersection LOS: C

Intersection Capacity Utilization 82.7%

ICU Level of Service E

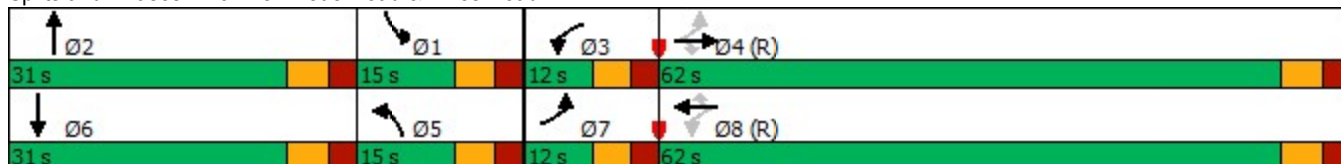
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



Total 2026_AM

6: Noella Leclair Way & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	612	7	29	2113	11	10	0	9	14	0	84
Future Volume (vph)	12	612	7	29	2113	11	10	0	9	14	0	84
Satd. Flow (prot)	1662	3318	0	1662	3322	0	1729	1547	0	1729	1547	0
Flt Permitted	0.056			0.390			0.702			0.752		
Satd. Flow (perm)	98	3318	0	682	3322	0	1278	1547	0	1369	1547	0
Satd. Flow (RTOR)		2			1			337			83	
Lane Group Flow (vph)	12	619	0	29	2124	0	10	9	0	14	84	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	77.0		11.0	77.0		32.0	32.0		32.0	32.0	
Total Split (%)	9.2%	64.2%		9.2%	64.2%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	76.2	70.8		76.2	70.8		25.3	25.3		25.3	25.3	
Actuated g/C Ratio	0.64	0.59		0.64	0.59		0.21	0.21		0.21	0.21	
v/c Ratio	0.09	0.32		0.06	1.08		0.04	0.02		0.05	0.21	
Control Delay	12.6	15.9		6.6	72.4		38.3	0.0		38.5	9.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.6	15.9		6.6	72.4		38.3	0.0		38.5	9.8	
LOS	B	B		A	E		D	A		D	A	
Approach Delay		15.8			71.5			20.2			13.9	
Approach LOS		B			E			C			B	
Queue Length 50th (m)	1.0	34.8		2.0	~295.6		1.9	0.0		2.7	0.2	
Queue Length 95th (m)	m3.2	48.0		4.9	#337.8		6.6	0.0		8.3	13.1	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	128	1958		474	1960		269	592		288	391	
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	0.32		0.06	1.08		0.04	0.02		0.05	0.21	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 73 (61%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 135

Control Type: Pretimed

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 57.1

Intersection LOS: E

Intersection Capacity Utilization 81.1%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

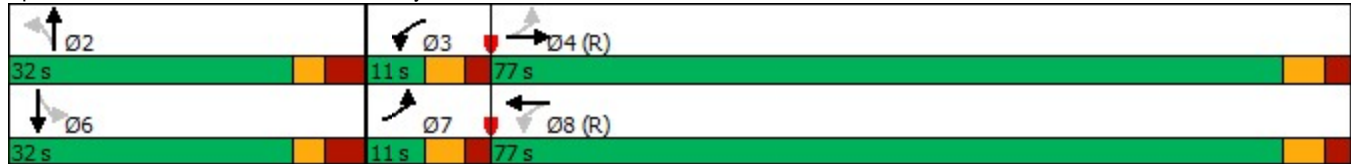
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	2	18	32	1	21	47	611	26	51	386	14
Future Volume (vph)	11	2	18	32	1	21	47	611	26	51	386	14
Satd. Flow (prot)	1729	1574	0	1729	1560	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.743			0.744			0.523			0.382		
Satd. Flow (perm)	1352	1574	0	1354	1560	0	933	3390	1517	682	3390	1517
Satd. Flow (RTOR)		18			21				46			46
Lane Group Flow (vph)	11	20	0	32	22	0	47	611	26	51	386	14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		54.4%	54.4%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	3.5	3.5		3.5	3.5		2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8		6.8	6.8		6.4	6.4	6.4	6.4	6.4	6.4
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	34.2	34.2		34.2	34.2		42.6	42.6	42.6	42.6	42.6	42.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.47	0.47	0.47	0.47	0.47	0.47
v/c Ratio	0.02	0.03		0.06	0.04		0.11	0.38	0.04	0.16	0.24	0.02
Control Delay	17.7	8.8										

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Total 2026_AM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	0	0	0	0	0	0	0	0	0	0	30
Future Volume (vph)	42	0	0	0	0	0	0	0	0	0	0	30
Satd. Flow (prot)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Lane Group Flow (vph)	0	42	0	0	0	0	0	0	0	0	30	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 13.3% ICU Level of Service A												
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	574	20	0	2197	0	57
Future Volume (vph)	574	20	0	2197	0	57
Satd. Flow (prot)	3373	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3373	0	0	3390	0	1543
Lane Group Flow (vph)	594	0	0	2197	0	57
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 67.4%				ICU Level of Service C		
Analysis Period (min) 15						

Total 2026_AM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	0	0	14
Future Volume (vph)	3	0	0	0	0	14
Satd. Flow (prot)	1695	0	0	1784	1514	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1514	0
Lane Group Flow (vph)	3	0	0	0	14	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	52	3	0	12
Future Volume (vph)	0	0	52	3	0	12
Satd. Flow (prot)	1784	0	1772	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1772	0	0	1784
Lane Group Flow (vph)	0	0	55	0	0	12
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 6.7%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	12	0	0	12	0
Future Volume (vph)	55	12	0	0	12	0
Satd. Flow (prot)	1674	0	0	1784	1784	0
Flt Permitted	0.961					
Satd. Flow (perm)	1674	0	0	1784	1784	0
Lane Group Flow (vph)	67	0	0	0	12	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 14.0%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	0	576	67	0	454
Future Volume (vph)	0	0	576	67	0	454
Satd. Flow (prot)	0	1784	3390	1517	0	3390
Flt Permitted						
Satd. Flow (perm)	0	1784	3390	1517	0	3390
Lane Group Flow (vph)	0	0	576	67	0	454
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 20.1%			ICU Level of Service A			
Analysis Period (min) 15						

Total 2026_PM
3: Mer-Bleue Road & Innes Road

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	1384	164	181	909	381	191	333	263	458	522	101
Future Volume (vph)	145	1384	164	181	909	381	191	333	263	458	522	101
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	3288	3166	0	3288	3309	0
Flt Permitted	0.185			0.076			0.950			0.950		
Satd. Flow (perm)	330	3390	1517	136	3390	1517	3288	3166	0	3288	3309	0
Satd. Flow (RTOR)			164			381		136			15	
Lane Group Flow (vph)	145	1384	164	181	909	381	191	596	0	458	623	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	17.0	59.0	59.0	17.0	59.0	59.0	23.0	31.0		23.0	31.0	
Total Split (%)	13.1%	45.4%	45.4%	13.1%	45.4%	45.4%	17.7%	23.8%		17.7%	23.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	64.2	52.6	52.6	64.2	52.6	52.6	16.9	24.8		16.9	24.8	
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.40	0.40	0.13	0.19		0.13	0.19	
v/c Ratio	0.52	1.01	0.23	0.91	0.66	0.45	0.45	0.83		1.07	0.97	
Control Delay	22.4	65.2	4.3	88.4	17.9	1.5	55.9	50.2		117.1	79.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.4	65.2	4.3	88.4	17.9	1.5	55.9	50.2		117.1	79.5	
LOS	C	E	A	F	B	A	E	D		F	E	
Approach Delay		55.6			22.3			51.6			95.4	
Approach LOS		E			C			D			F	
Queue Length 50th (m)	18.1	~188.5	0.0	34.4	46.2	0.1	23.6	61.3		~67.0	82.4	
Queue Length 95th (m)	29.4	#237.8	13.4	m#68.1	57.4	4.1	35.7	#87.5		#100.2	#120.1	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	279	1371	711	200	1371	840	427	714		427	643	
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	0.52	1.01	0.23	0.91	0.66	0.45	0.45	0.83		1.07	0.97	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 130

Control Type: Pretimed

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 53.8

Intersection LOS: D

Intersection Capacity Utilization 103.9%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

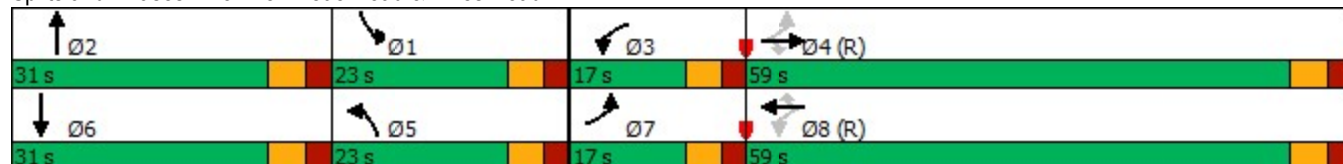
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	2084	18	42	1439	37	36	1	50	24	2	32
Future Volume (vph)	52	2084	18	42	1439	37	36	1	50	24	2	32
Satd. Flow (prot)	1695	3387	0	1695	3377	0	1729	1552	0	1729	1563	0
Flt Permitted	0.104			0.051			0.735			0.724		
Satd. Flow (perm)	186	3387	0	91	3377	0	1338	1552	0	1318	1563	0
Satd. Flow (RTOR)		1			4			50			32	
Lane Group Flow (vph)	52	2102	0	42	1476	0	36	51	0	24	34	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	13.0	85.0		13.0	85.0		32.0	32.0		32.0	32.0	
Total Split (%)	10.0%	65.4%		10.0%	65.4%		24.6%	24.6%		24.6%	24.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effect Green (s)	86.2	78.8		86.2	78.8		25.3	25.3		25.3	25.3	
Actuated g/C Ratio	0.66	0.61		0.66	0.61		0.19	0.19		0.19	0.19	
v/c Ratio	0.25	1.02		0.29	0.72		0.14	0.15		0.09	0.10	
Control Delay	9.0	51.0		11.8	20.4		45.1	13.0		44.2	15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.0	51.0		11.8	20.4		45.1	13.0		44.2	15.6	
LOS	A	D		B	C		D	B		D	B	
Approach Delay		49.9			20.2			26.3			27.5	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	3.6	~300.8		2.9	131.3		7.7	0.2		5.1	0.4	
Queue Length 95th (m)	m6.8	m#336.2		6.8	157.4		17.5	11.2		12.9	9.4	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	205	2053		147	2048		260	342		256	329	
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	0.25	1.02		0.29	0.72		0.14	0.15		0.09	0.10	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 109 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 125

Control Type: Pretimed

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 37.2

Intersection LOS: D

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

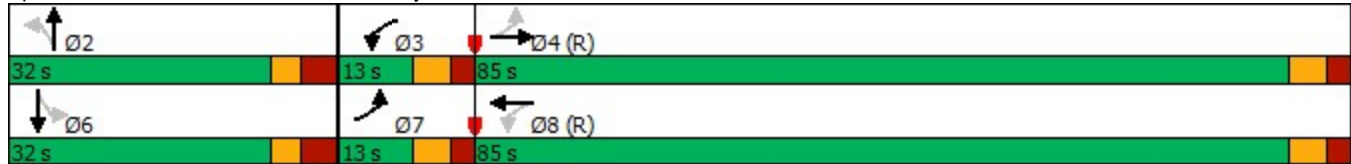
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	34	143	44	7	87	146	507	48	127	664	75
Future Volume (vph)	149	34	143	44	7	87	146	507	48	127	664	75
Satd. Flow (prot)	1729	1600	0	1729	1567	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.696			0.646			0.352			0.445		
Satd. Flow (perm)	1267	1600	0	1176	1567	0	628	3390	1517	794	3390	1517
Satd. Flow (RTOR)		143			87				48			75
Lane Group Flow (vph)	149	177	0	44	94	0	146	507	48	127	664	75
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	41.0	41.0		41.0	41.0		33.0	33.0	33.0	33.0	33.0	33.0
Total Split (s)	41.0	41.0		41.0	41.0		49.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%		45.6%	45.6%		5					

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Total 2026_PM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Flt Permitted												
Satd. Flow (perm)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free				Free				Stop			
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 0.0%					ICU Level of Service A							
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	276	20	0	1471	0	68
Future Volume (vph)	276	20	0	1471	0	68
Satd. Flow (prot)	3356	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3356	0	0	3390	0	1543
Lane Group Flow (vph)	296	0	0	1471	0	68
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 46.3%				ICU Level of Service A		
Analysis Period (min) 15						

Total 2026_PM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	0	0	0	0	9
Future Volume (vph)	30	0	0	0	0	9
Satd. Flow (prot)	1695	0	0	1784	1543	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1543	0
Lane Group Flow (vph)	30	0	0	0	9	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	1784	0	0	1784
Flt Permitted						
Satd. Flow (perm)	1784	0	1784	0	0	1784
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	0	1784	1784	0
Flt Permitted						
Satd. Flow (perm)	1784	0	0	1784	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 13.3%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	45	742	0	0	866
Future Volume (vph)	0	45	742	0	0	866
Satd. Flow (prot)	0	1543	3390	1784	0	3390
Fit Permitted						
Satd. Flow (perm)	0	1543	3390	1784	0	3390
Lane Group Flow (vph)	0	45	742	0	0	866
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 31.7%			ICU Level of Service A			
Analysis Period (min) 15						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	394	82	221	1480	677	135	406	83	165	186	60
Future Volume (vph)	40	394	82	221	1480	677	135	406	83	165	186	60
Satd. Flow (prot)	1647	3293	1473	1647	3293	1473	3195	3211	0	3195	3171	0
Flt Permitted	0.072			0.501			0.950			0.950		
Satd. Flow (perm)	125	3293	1473	868	3293	1473	3195	3211	0	3195	3171	0
Satd. Flow (RTOR)			138			386		18			33	
Lane Group Flow (vph)	40	394	82	221	1480	677	135	489	0	165	246	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	12.0	62.0	62.0	12.0	62.0	62.0	15.0	31.0		15.0	31.0	
Total Split (%)	10.0%	51.7%	51.7%	10.0%	51.7%	51.7%	12.5%	25.8%		12.5%	25.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	62.2	55.6	55.6	62.2	55.6	55.6	8.9	24.8		8.9	24.8	
Actuated g/C Ratio	0.52	0.46	0.46	0.52	0.46	0.46	0.07	0.21		0.07	0.21	
v/c Ratio	0.28	0.26	0.11	0.45	0.97	0.76	0.57	0.72		0.70	0.36	
Control Delay	16.9	20.2	0.6	3.6	22.9	12.3	63.8	49.7		70.5	36.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.9	20.2	0.6	3.6	22.9	12.3	63.8	49.7		70.5	36.9	
LOS	B	C	A	A	C	B	E	D		E	D	
Approach Delay		16.8			18.1			52.7			50.4	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	4.0	29.0	0.0	10.4	196.3	121.1	16.1	54.8		19.8	22.6	
Queue Length 95th (m)	8.9	39.7	1.3	m8.5	m144.0	m62.2	26.4	73.6		#33.9	34.8	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	142	1525	756	489	1525	889	236	677		236	681	
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	0.28	0.26	0.11	0.45	0.97	0.76	0.57	0.72		0.70	0.36	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 110

Control Type: Pretimed

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 26.8

Intersection LOS: C

Intersection Capacity Utilization 87.5%

ICU Level of Service E

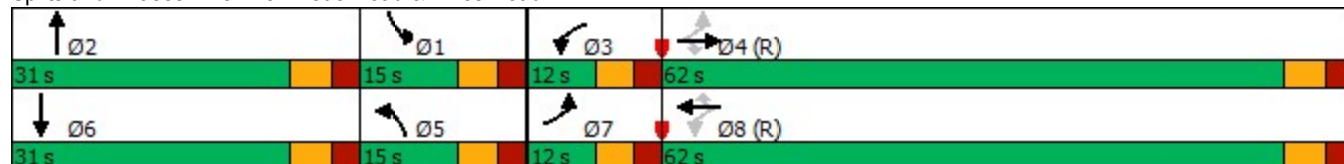
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	662	7	31	2288	12	10	0	9	16	0	91
Future Volume (vph)	13	662	7	31	2288	12	10	0	9	16	0	91
Satd. Flow (prot)	1662	3318	0	1662	3322	0	1729	1547	0	1729	1547	0
Flt Permitted	0.056			0.365			0.698			0.752		
Satd. Flow (perm)	98	3318	0	639	3322	0	1270	1547	0	1369	1547	0
Satd. Flow (RTOR)		1			1			309			83	
Lane Group Flow (vph)	13	669	0	31	2300	0	10	9	0	16	91	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	77.0		11.0	77.0		32.0	32.0		32.0	32.0	
Total Split (%)	9.2%	64.2%		9.2%	64.2%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effect Green (s)	76.2	70.8		76.2	70.8		25.3	25.3		25.3	25.3	
Actuated g/C Ratio	0.64	0.59		0.64	0.59		0.21	0.21		0.21	0.21	
v/c Ratio	0.10	0.34		0.07	1.17		0.04	0.02		0.06	0.23	
Control Delay	13.0	16.8		6.6	109.2		38.3	0.0		38.6	11.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.0	16.8		6.6	109.2		38.3	0.0		38.6	11.5	
LOS	B	B		A	F		D	A		D	B	
Approach Delay		16.7			107.9			20.2			15.5	
Approach LOS		B			F			C			B	
Queue Length 50th (m)	1.0	39.0		2.1	~341.7		1.9	0.0		3.0	1.5	
Queue Length 95th (m)	m3.2	52.2		5.2	#383.5		6.6	0.0		9.1	15.0	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	128	1958		449	1960		267	570		288	391	
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	0.10	0.34		0.07	1.17		0.04	0.02		0.06	0.23	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 73 (61%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 145

Control Type: Pretimed

Maximum v/c Ratio: 1.17

Intersection Signal Delay: 84.4

Intersection LOS: F

Intersection Capacity Utilization 86.2%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

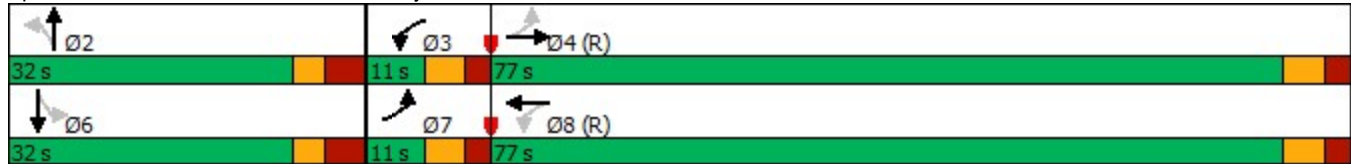
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	19	34	1	21	51	662	27	53	418	16
Future Volume (vph)	12	2	19	34	1	21	51	662	27	53	418	16
Satd. Flow (prot)	1729	1572	0	1729	1560	0	1695	3390	1517	1695	3390	1517
Flt Permitted	0.743			0.744								

Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Total 2031_AM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	0	0	0	0	0	0	0	0	0	0	32
Future Volume (vph)	46	0	0	0	0	0	0	0	0	0	0	32
Satd. Flow (prot)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1695	0	0	1784	0	0	1784	0	0	1543	0
Lane Group Flow (vph)	0	46	0	0	0	0	0	0	0	0	32	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 13.3% ICU Level of Service A												
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		 
Traffic Volume (vph)	622	21	0	2378	0	61
Future Volume (vph)	622	21	0	2378	0	61
Satd. Flow (prot)	3373	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3373	0	0	3390	0	1543
Lane Group Flow (vph)	643	0	0	2378	0	61
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 72.7%				ICU Level of Service C		
Analysis Period (min) 15						

Total 2031_AM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	0	0	0	16
Future Volume (vph)	3	0	0	0	0	16
Satd. Flow (prot)	1695	0	0	1784	1514	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1514	0
Lane Group Flow (vph)	3	0	0	0	16	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	56	3	0	13
Future Volume (vph)	0	0	56	3	0	13
Satd. Flow (prot)	1784	0	1772	0	0	1784
Fit Permitted						
Satd. Flow (perm)	1784	0	1772	0	0	1784
Lane Group Flow (vph)	0	0	59	0	0	13
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 6.7%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	13	0	0	13	0
Future Volume (vph)	59	13	0	0	13	0
Satd. Flow (prot)	1674	0	0	1784	1784	0
Flt Permitted	0.961					
Satd. Flow (perm)	1674	0	0	1784	1784	0
Lane Group Flow (vph)	72	0	0	0	13	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 14.3%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	0	622	73	0	490
Future Volume (vph)	0	0	622	73	0	490
Satd. Flow (prot)	0	1784	3390	1517	0	3390
Flt Permitted						
Satd. Flow (perm)	0	1784	3390	1517	0	3390
Lane Group Flow (vph)	0	0	622	73	0	490
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 21.5%			ICU Level of Service A			
Analysis Period (min) 15						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	1495	176	196	985	412	206	356	285	496	560	110
Future Volume (vph)	156	1495	176	196	985	412	206	356	285	496	560	110
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	3288	3163	0	3288	3305	0
Flt Permitted	0.153			0.076			0.950			0.950		
Satd. Flow (perm)	273	3390	1517	136	3390	1517	3288	3163	0	3288	3305	0
Satd. Flow (RTOR)			176			412		137			15	
Lane Group Flow (vph)	156	1495	176	196	985	412	206	641	0	496	670	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Minimum Split (s)	10.9	33.4	33.4	10.9	33.4	33.4	11.1	30.2		11.1	30.2	
Total Split (s)	17.0	59.0	59.0	17.0	59.0	59.0	23.0	31.0		23.0	31.0	
Total Split (%)	13.1%	45.4%	45.4%	13.1%	45.4%	45.4%	17.7%	23.8%		17.7%	23.8%	
Yellow Time (s)	3.5	3.7	3.7	3.5	3.7	3.7	3.5	3.7		3.5	3.7	
All-Red Time (s)	2.4	2.7	2.7	2.4	2.7	2.7	2.6	2.5		2.6	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.4	6.4	5.9	6.4	6.4	6.1	6.2		6.1	6.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Act Effct Green (s)	64.2	52.6	52.6	64.2	52.6	52.6	16.9	24.8		16.9	24.8	
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.40	0.40	0.13	0.19		0.13	0.19	
v/c Ratio	0.61	1.09	0.25	0.98	0.72	0.48	0.48	0.90		1.16	1.04	
Control Delay	26.3	90.0	4.3	101.2	19.7	2.0	56.7	56.8		144.7	96.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	26.3	90.0	4.3	101.2	19.7	2.0	56.7	56.8		144.7	96.8	
LOS	C	F	A	F	B	A	E	E		F	F	
Approach Delay		76.3			25.1			56.8			117.2	
Approach LOS		E			C			E			F	
Queue Length 50th (m)	19.5	~226.6	0.0	38.4	52.0	0.1	25.6	68.5		~77.4	~96.0	
Queue Length 95th (m)	31.5	#269.2	13.8	m#68.1	84.4	m12.6	38.0	#101.0		#111.4	#134.4	
Internal Link Dist (m)		295.8			154.7			109.1			239.2	
Turn Bay Length (m)	140.0		140.0	180.0		130.0	110.0			85.0		
Base Capacity (vph)	256	1371	718	200	1371	859	427	714		427	642	
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	0.61	1.09	0.25	0.98	0.72	0.48	0.48	0.90		1.16	1.04	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 130

Control Type: Pretimed

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 67.0

Intersection LOS: E

Intersection Capacity Utilization 110.6%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

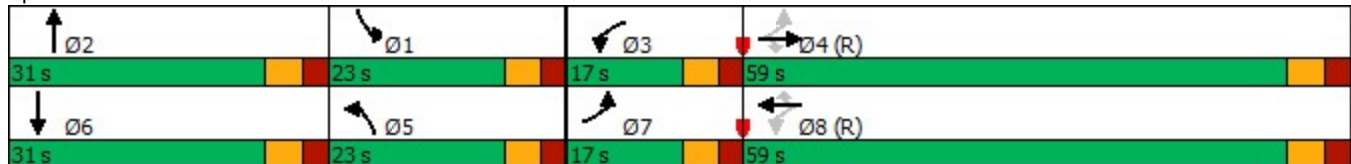
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Mer-Bleue Road & Innes Road



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	2254	18	43	1558	40	36	1	52	26	2	35
Future Volume (vph)	56	2254	18	43	1558	40	36	1	52	26	2	35
Satd. Flow (prot)	1695	3387	0	1695	3377	0	1729	1552	0	1729	1562	0
Flt Permitted	0.080			0.051			0.733			0.722		
Satd. Flow (perm)	143	3387	0	91	3377	0	1334	1552	0	1314	1562	0
Satd. Flow (RTOR)		1			4			52			35	
Lane Group Flow (vph)	56	2272	0	43	1598	0	36	53	0	26	37	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	10.9	37.2		10.9	37.2		32.0	32.0		32.0	32.0	
Total Split (s)	13.0	85.0		13.0	85.0		32.0	32.0		32.0	32.0	
Total Split (%)	10.0%	65.4%		10.0%	65.4%		24.6%	24.6%		24.6%	24.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.5		2.2	2.5		3.7	3.7		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.9	6.2		5.9	6.2		6.7	6.7		6.7	6.7	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Act Effct Green (s)	86.2	78.8		86.2	78.8		25.3	25.3		25.3	25.3	
Actuated g/C Ratio	0.66	0.61		0.66	0.61		0.19	0.19		0.19	0.19	
v/c Ratio	0.31	1.11		0.29	0.78		0.14	0.15		0.10	0.11	
Control Delay	8.9	69.3		12.2	22.5		45.1	12.7		44.4	15.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.9	69.3		12.2	22.5		45.1	12.7		44.4	15.3	
LOS	A	E		B	C		D	B		D	B	
Approach Delay		67.9			22.3			25.8			27.3	
Approach LOS		E			C			C			C	
Queue Length 50th (m)	3.7	~343.7		3.0	152.0		7.7	0.2		5.5	0.4	
Queue Length 95th (m)	m3.5	m#297.6		7.3	182.0		17.5	11.2		13.8	9.9	
Internal Link Dist (m)		124.6			214.7			31.8			118.1	
Turn Bay Length (m)	75.0			100.0						35.0		
Base Capacity (vph)	179	2053		147	2048		259	343		255	332	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.31	1.11		0.29	0.78		0.14	0.15		0.10	0.11	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 109 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 145

Control Type: Pretimed

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 48.2

Intersection LOS: D

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

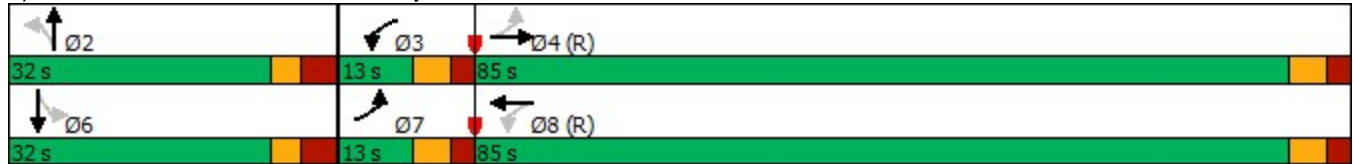
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 6: Noella Leclair Way & Innes Road



Splits and Phases: 9: Mer-Bleue Road & Roger Pharand Street



Total 2031_PM
11: Roger Pharand Street

04/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Flt Permitted												
Satd. Flow (perm)	0	1784	0	0	1784	0	0	1784	0	0	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free		Free				Stop				Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 0.0%						ICU Level of Service A						
Analysis Period (min) 15												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2257	20	0	1592	0	72
Future Volume (vph)	2257	20	0	1592	0	72
Satd. Flow (prot)	3387	0	0	3390	0	1543
Flt Permitted						
Satd. Flow (perm)	3387	0	0	3390	0	1543
Lane Group Flow (vph)	2277	0	0	1592	0	72
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 77.9%				ICU Level of Service D		
Analysis Period (min) 15						

Total 2031_PM
14: Noella Leclair Way

04/15/2025

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	0	0	0	0	10
Future Volume (vph)	32	0	0	0	0	10
Satd. Flow (prot)	1695	0	0	1784	1543	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	0	0	1784	1543	0
Lane Group Flow (vph)	32	0	0	0	10	0
Sign Control	Stop			Free	Free	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%				ICU Level of Service A		
Analysis Period (min) 15						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	1784	0	0	1784
Fit Permitted						
Satd. Flow (perm)	1784	0	1784	0	0	1784
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 13.3%			ICU Level of Service A			
Analysis Period (min) 15						



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	1784	0	0	1784	1784	0
Flt Permitted						
Satd. Flow (perm)	1784	0	0	1784	1784	0
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 13.3%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	0	49	798	0	0	932
Future Volume (vph)	0	49	798	0	0	932
Satd. Flow (prot)	0	1543	3390	1784	0	3390
Fit Permitted						
Satd. Flow (perm)	0	1543	3390	1784	0	3390
Lane Group Flow (vph)	0	49	798	0	0	932
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 33.3%			ICU Level of Service A			
Analysis Period (min) 15						