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Conseil des écoles publiques de l'Est de l'Ontario-2405, chemin de la Mer-Bleue Road-Traffic Impact Assessment and Road Modification Approval

City of Ottawa

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Final Report

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New Elementary School Traffic Impact Assessment and RMA

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EXP Quality System Checks			
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Introduction

EXP has been engaged by CEPEO (Conseil des écoles publiques de l'Est de l'Ontario) to conduct a Traffic Impact Assessment (TIA) and Road Modification Approval (RMA) analysis for the development of a new elementary school at 2405 Mer Bleue Rd in Ottawa, Ontario. This report serves as a summary of the findings and recommendations resulting from our assessment. The proposed project encompasses the construction of a two-story elementary school building, as well as a childcare facility. To facilitate efficient transportation, bus lay-bys are planned along Jérome Jodoin Drive to the east and Monardia Way to the north. The main parking lot, located south of the school building, will feature two access driveways for ease of entry and exit. Additionally, a car drop-off lay-by is proposed within the parking lot to streamline student drop-off procedures and serve the childcare facility. A review of the subject site is shown in **Figure 1.**

Figure 1: Site Location Plan

The proposed development will consist of:

- 2 storey elementary school with gross floor area of 3,416.8 m^2
- 49 proposed parking spaces including 2 accessible parking spaces.

The proposed development is anticipated to be completed in one phase by 2024.

1. Screening

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

- **Trip Generation Trigger** The development is anticipated to be built over a ground floor area of 4,000 m^2. According to ITE trip generation manual, the maximum number of trips generated during peak hours is 300 which is higher than the City of Ottawa established threshold. Thus, the Trip generation trigger is satisfied.
- **Location Trigger** The development does not propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Network nor is it situated in a Design Priority Area or Transit Oriented Development zone.
- **Safety Trigger** According to City of Ottawa screening guidelines, no safety trigger is prompted.

Upon review of the Screening assessment by the City, the Trip Generation prompts a full TIA.

2. Site Evaluation

2.1 Proposed Development

The Conseil des écoles publiques de l'Est de l'Ontario is proposing an elementary school development at 2405 Mer Bleue Road. The subject site is designated as 'Suburban Area' on Schedule 'B' of the City of Ottawa's Official Plan most specifically as part of the Mer Bleue Urban Expansion Area. It is currently zoned as Minor Institutional Zone, Sub-zone A (I1A) and Residential Third Density Zone, Subzone YY (R3YY). As per the I1A zone, a school and a daycare are permitted uses.

The proposed development will consist of a new 2-storey elementary school with ground floor area of 4,000 m^2. Based on current attendance data, on average approximately 400 students and 40 employees will attend the school. Due to the nature of the development, bus lay-bys are strategically positioned along both Jérome Jodoin Drive to the east and Monardia Way to the north. To optimize transportation convenience, these designated areas will facilitate smooth bus operations and ensure efficient student pick-up and drop-off, shown in **Figure 2**.

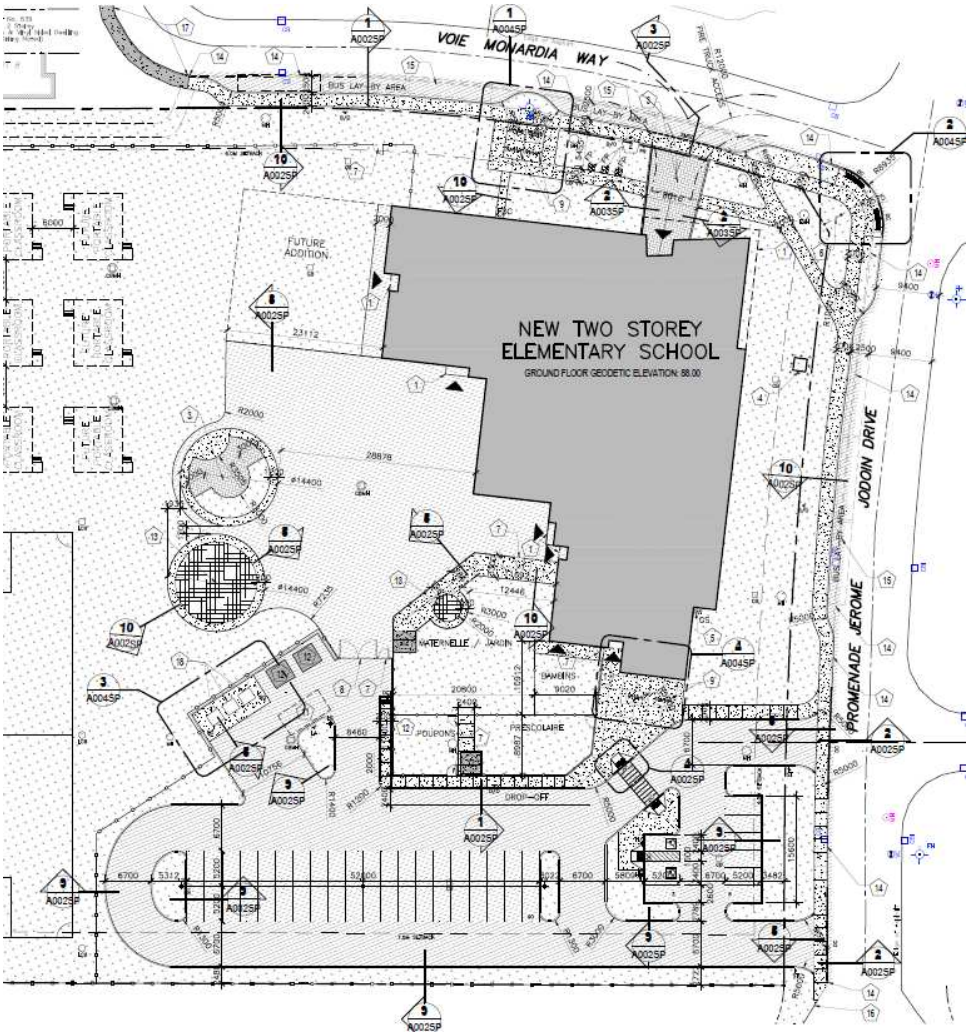


Figure 2: Site Plan

The main parking lot, situated south of the school, will be designed with two access driveways, enabling convenient entry and exit for vehicles. This configuration aims to minimize traffic congestion and enhance the overall flow of vehicles within the parking area. Furthermore, to streamline the student drop-off process, a dedicated car drop-off lay-by is planned within the parking lot. This designated area will provide a designated spot for parents or guardians to safely drop off their children, promoting efficiency and safety during peak arrival times. The parking lot containing 49 parking spaces including 2 accessible parking spaces. It will be serviced by two full-movement accesses on Jérome Jodoin Drive. The proposed development is anticipated to be completed in one phase, with full occupancy by the year 2024.

By incorporating these transportation features, the proposed design aims to optimize traffic flow, enhance accessibility, and improve the overall efficiency of transportation operations within the elementary school site. A copy of the proposed site plan is included in **Appendix B**.

2.2 Existing Conditions

2.2.1 Roadways

Monardia Way is an east-west municipal local road which extends from Willow Aster Circle to Jérome Jodoin Drive with a 2-lane cross section and on-street parking. The road has an urban cross section with sidewalk provided on both sides of the road.

Jérome Jodoin Drive is a north-south municipal collector road which extends from Sweetclover Way to Brian Coburn East with a 2-lane cross section and on-street parking in both directions. The road has an urban cross section.

Sweetclover Way is an east-west municipal local road extending from Jérome Jodoin Drive to Arum Terrace with a 2-lane urban cross section and on-street parking.

Mer Bleue Road is a north-south arterial road connecting Innes Road to Navan Road in Ottawa. The section adjacent to the proposed development is a two-lane rural road with a posted speed limit of 50 km/h south of a point 70m south of Renaud Road and a posted speed limit of 60 km/h north of a point 70m south of Renaud Road. It has a right-of-way protection of 20 meters, however ROW protection to 37.5 meters will be required as per the Official Plan.

The roadway network classification surrounding the subject site is illustrated in **Figure 3,** all roadways within the study area fall under the jurisdiction of the City of Ottawa:

Figure 3: Roadway Classifications

2.2.2 Intersection

Jérome Jodoin Drive / Willow Aster Circle

- Unsignalized 4-leg intersection with 'Stop' control signs on minor side streets (Willow Aster Circle & Bartonia Circle)
- All approaches are two-way, with one lane per direction
- No crosswalks on any of the four approaches

Jerome Jodoin Drive / Monardia Way

- Unsignalized 4-leg intersection with 'Stop' control signs on side streets (Monardia Way & Arum Terrace)
- All approaches are two-way, with one lane per direction
- There is a pedestrian pathway to the existing Georges Dassylva Park
- No crosswalks on any of the four approaches

Jerome Jodoin Drive / Decoeur Drive

- Roundabout at 4-leg intersection with "Yield" signs on all approaches and crosswalks with "Stop for Pedestrians" signs on all approaches.
- All the approaches are single lanes in each direction
- Sidewalks on both sides of all approaches

Mer-Bleue Road / Copperhead Street-Décoeur Drive

- Unsignalized 4-leg intersection with 'Stop' control signs on side streets (Copperhead Street & Promenade Décoeur Drive)
- West of Mer-Bleue Road is not fully developed, as of July 2023
- Divided two lanes in each direction on Mer-Bleue Road north of Décoeur Drive with transition to undivided single lanes south of Copperhead Street.
- Two-way single lanes on Copperhead Street and Promenade Décoeur Drive
- No crosswalk on any of the four approaches

Mer-Bleue Road / Renaud Road

- Unsignalized 3-leg intersection with 'Stop' control signs on all approaches
- One travel lane on all approaches
- No crosswalk on any of the three approaches

2.2.3 Driveways to Adjacent Developments

In a radius of 200 m around the site access are multiple driveways on Jérome Jodoin Drive, Sweetclover Way, Monardia Way and Willow Aster Circle, most of them serving private residential properties, mostly detached houses.

2.2.4 Pedestrian and Cycling Facilities

Concrete sidewalks are provided on both sides of Monardia Way, Jérome Jodoin Drive, and Décoeur Drive. Concrete sidewalks are on one side of Arum Terrace, Bartonia Circle and Willow Aster Circle. No sidewalks are provided on Sweetclover Way.

Mer-Bleue Road is classified as part of Ottawa's primary cycling network as a Spine Route. Brian Coburn Boulevard and Renaud Road are classified as Local Cycling Routes in the City's Ultimate Cycling Network. Cycling facilities along the study area roadways are described as follows:

- Paved shoulders along Mer-Bleue Road
- There are no MPs nor cycle tracks or bicycle lanes in the vicinity of the subject site.

Please note that the City's Ottawa Cycling Plan does not identify any cycling projects in the vicinity of the subject site. **Figure 4** below represents the Area Cycling Network according to the City of Ottawa Transportation Master Plan 2013.

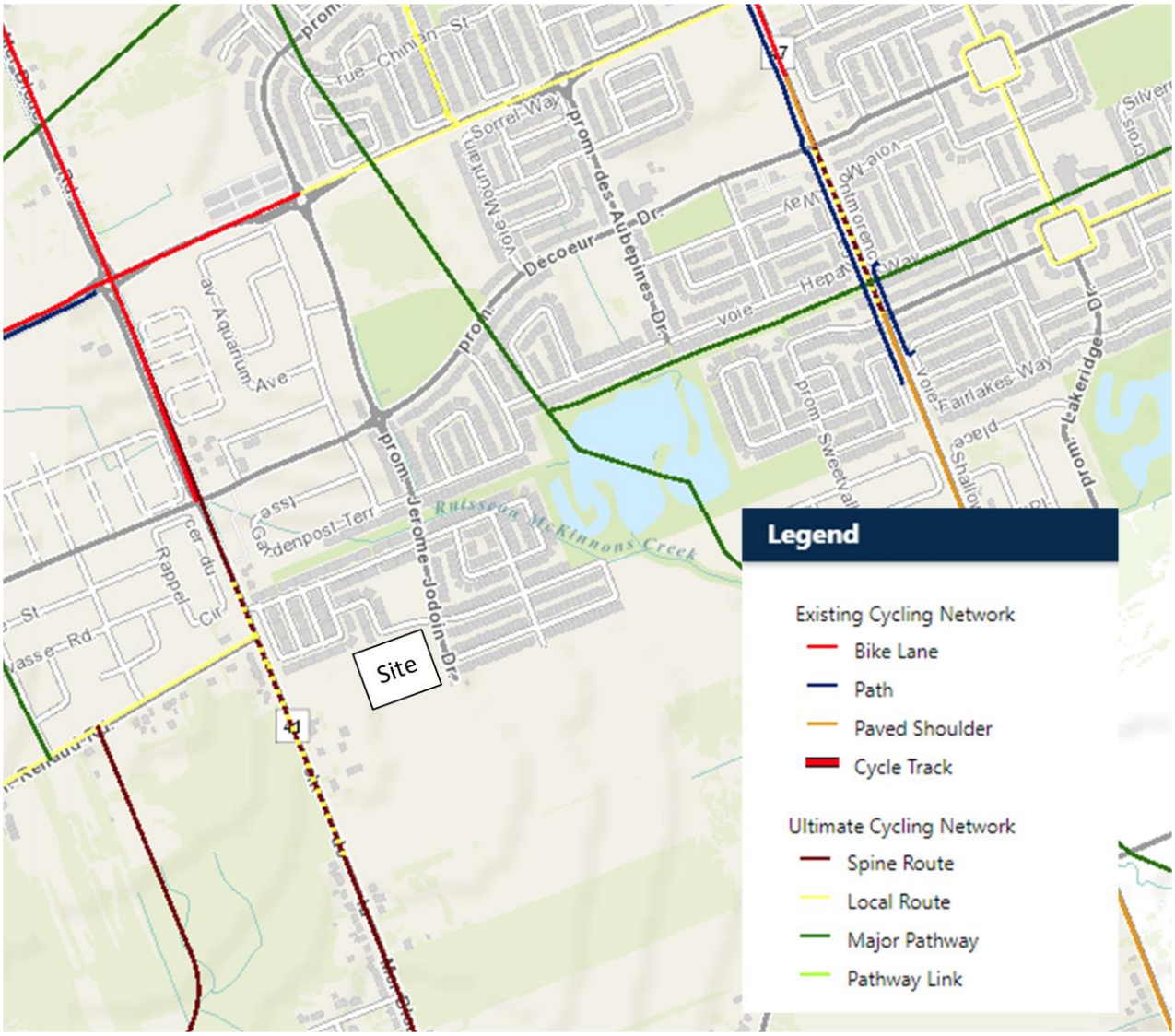


Figure 4: Existing Cycling Network

2.2.5 Transit

The following transit route passes by Jérome Jodoin Drive in proximity to the proposed school location:

- Route 32 – Blair to Chapel Hill: Route 32 is a route that runs between Blair Station and the Chapel Hill neighborhood to the east. It runs 5 days a week during AM and PM peak times with average 30-minute headways except for some exceptions. The closest bus stop to the proposed development location is 150m to the north. **Figure 5** below shows the transit services that operates within the study area.

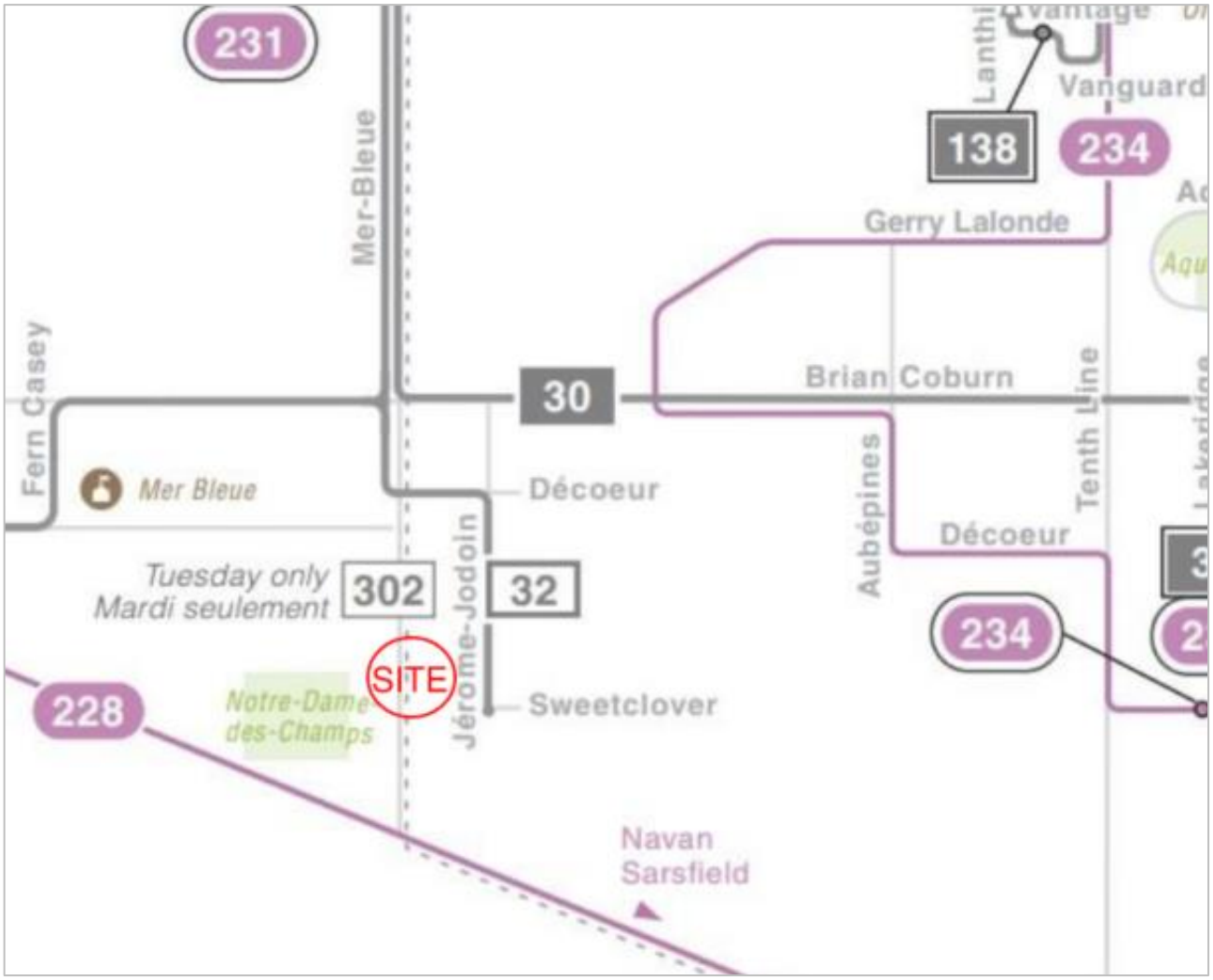


Figure 5: OC Transpo System Map

2.2.6 Traffic Management Measures

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

2.2.7 Traffic Volumes

Traffic counts were coordinated at the study area intersections in order to determine the existing pedestrian, cyclist and vehicular traffic volumes. Weekday traffic counts were performed between the hours of 7:00-9:00, 15:00-17:00 including all transportation modes which would capture both AM and PM peak hours of the elementary school. The traffic counts were completed on the following dates in the **Table 1** below.

Table 1: Intersection Traffic Count

Intersections	Date
Jerome Jodoin Drive / Promenade Decoeur Drive	June 14, 2023
Jerome Jodoin Drive / Monardia Way	June 20, 2023
Mer Bleue Road / Copperhead Street & Promenade Decoeur Drive	June 29, 2023
Mer Bleue Road / Renaud Road	June 29, 2023

Peak hour summary sheets of the above traffic counts are included in **Appendix C**. Existing weekday AM and PM peak hour traffic volumes at the study area intersections are shown in **Figure 6**.

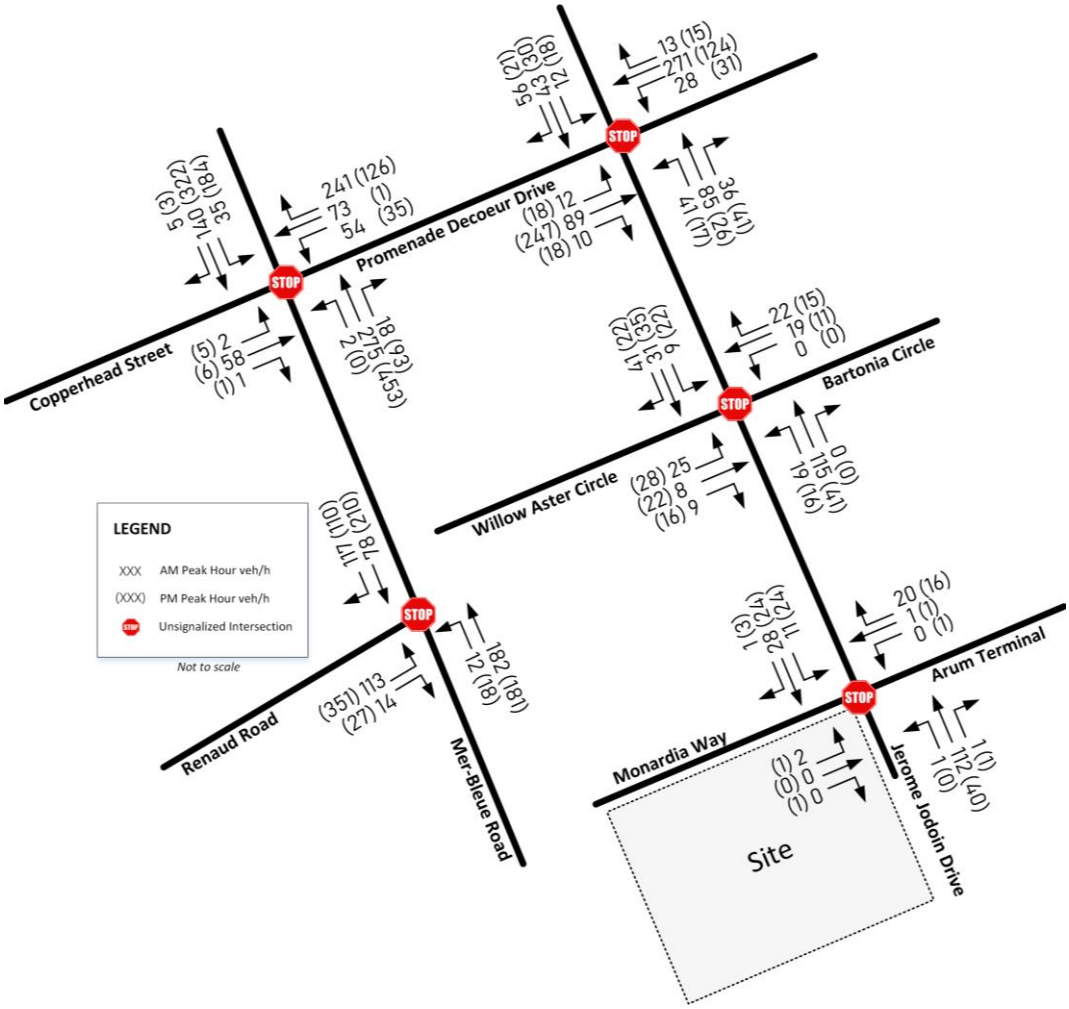


Figure 6: Existing Traffic Volumes

2.2.8 Collision Records

Historical collision data from the last five years was obtained from the Open Data Ottawa website for the study area intersections. The collision data has been evaluated to determine if there are any identifiable collision patterns. **Table 2** summarizes the number of collisions at Jérome Jodoin Drive / Monardia Way, Jérome Jodoin Drive / Decoeur Drive, Jerome Jodoin Drive / Willow Aster Circle, Mer Bleue Road / Décoeur Drive and Mer Bleue Road / Renaud Road intersections from January 1, 2017 to December 31, 2022.

Table 2: Reported Collisions

Intersection	Impact Types					Total Number of Collisions
	Angle	Sideswipe	Rear End	Turning Movement	SMV/Other	
Jerome Jodoin Drive / Promenade Decoeur	1				1	**2**
Jerome Jodoin Drive / Monardia Way					1	**1**
Jerome Jodoin Drive / Willow Aster Circile						**0**
Mer Bleue Rd. / Promenade Decoeur Drive						**0**
Mer Bleue Rd. / Renaud Rd.	2		1		1	**4**

Based on the collision history within the study area, no significant collision patterns are identified. The City of Ottawa will continue to monitor collision occurrences to determine if any operational issues develop in the future.

2.3 Planned Conditions

2.3.1 Planned Transportation Projects

The 2013 Transportation Master Plan (TMP) provides a framework for future road network enhancements under the 2031 'Affordable Network'. Several projects have been identified that could potentially influence traffic patterns near the site:

- Tenth Line Road - The planned widening of Tenth Line Road from two to four lanes, spanning from Harvest Valley Avenue to south of Wall Road, is scheduled for Phase 3 of development, anticipated to take place between 2020 and 2025.
- Mer Bleue Road - A widening project for Mer-Bleue Road is also planned. This initiative aims to increase road capacity and accommodate future traffic demands. Specific details regarding the timeline and extent of the widening are currently unavailable.

These proposed road network modifications align with the long-term goals of the TMP, aiming to improve traffic flow and enhance accessibility in the vicinity of the site. The implementation of these projects will likely influence traffic patterns and contribute to the overall transportation infrastructure within the area.

In the 2019 City-Wide Development Charges Background Study, revisions have been made to the timing of the TMP road network modifications mentioned earlier. The following updates have been identified:

- Tenth Line Road - The planned widening of Tenth Line Road has been rescheduled, and it is now expected to take place between 2025 and 2029. This revision reflects a shift in the timeline for the project.
- Mer-Bleue Road - The planned widening of Mer-Bleue Road has been implemented, with the exception of the southernmost section that passes through the Renaud Road intersection. The widening of this particular section has been revised, and it is now scheduled for the period of 2020 to 2024.

2.3.2 Other Area Developments

In proximity of the proposed development, there are other residential and mixed-use developments that are under construction, approved, or in the approval process. Other developments in the area include the following.

2503 Mer Bleue Road: Development consisting of 274 Single-Family home, 370 Townhome and 2,100 m^2 of commercial retail are proposed on this property located at the north-east corner of the Mer-Bleue Rd / Wall Rd intersection. A TIA was prepared by IBI in November 2021 in support of this development, with an estimated build out over a period of three years and full build out scheduled for 2025.

2345 Mer Bleue Road: Development of two buildings of stacked dwelling units were proposed on this property located on the north-east corner of the Mer-Bleue Rd / Willow Aster Cir. intersection. The application is still at the initial stages and no traffic impact study has been prepared yet.

2.3.3 Study Area and Time Periods

As per the City of Ottawa TIA's guidelines, the study area includes intersections on walking and cycling access routes within 600m of the site as well as arterial intersections impacted by auto demands from development. The following intersections fall within the described scope:

- Jérome Jodoin Drive / Monardia Way
- Jérome Jodoin Drive / Decoeur Drive
- Jérome Jodoin Drive / Brian Coburn Boulevard
- Jérome Jodoin Willow Aster Circle
- Décoeur Drive / Mer-Bleue Road

The proposed elementary school development is in keeping with the City's land use planning for this area, its Community Design Plan, and the previous rezoning of the site to permit its use as a community school site. Further, the intersection of Brian Coburn Boulevard East/Jérome Jodoin Drive has recently been reconfigured as a roundabout to accommodate growth needs planned for in this area. The intersection of Mer-Bleue Road and Décoeur Drive may see a minor increase of left-turn in/right-turn out volumes that can be accommodated under its current configuration and an alternate routing through the Brian Coburn Boulevard East/Jérome Jodoin Drive intersection is also available. As such, it is unlikely that the proposed elementary school development will result in the need to modify the Mer-Bleue Road/Décoeur Drive intersection, which would be best analyzed and modified as part of the future expansion of Mer-Bleue Road and planned growth along the west side of Mer-Bleue Road. Regarding the intersection of Jerome Jodoin Drive and Willow Aster Circle, we have been informed of the proposed closure of the temporary access to Mer-Bleue Road. This closure is expected to have a significant impact on the traffic volumes along Jerome Jodoin Drive, resulting in increased volumes north of Willow Aster Circle. As a result, it is anticipated that the redirected traffic will predominantly utilize the Jérome Jodoin Drive/Décoeur Drive intersection, which provides the nearest connection to Mer-Bleue Road.

The study area for this report includes the roadways that are anticipated to accommodate most of the additional trips to be generated by the school. The intersections to be analyzed are as follows:

- Jérome Jodoin Drive / Monardia Way
- Jérome Jodoin Drive / Décoeur Drive
- Mer-Bleue Road / Décoeur Drive (DC intersections)
- Mer Bleue Road / Renaud Road (DC intersections)

The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic.

2.4 Horizon Years

The proposed facility is expected to be completed in one phase with a target build-out year of 2024. In accordance with the City of Ottawa TIA Guidelines (2017), the following horizons will be considered for analysis.

- 2024, which represents the anticipated build-out horizon;
- 2029, which represents the build-out year plus five years.

2.5 Exemptions Review

The TIA Guidelines provide exemption considerations for elements of the Design Review and Network Impact components. **Table 3** summarizes the TIA modules that are either applicable or not applicable to this study:

Table 3: Possible Exemptions Review

TIA Module	Element	Exemption Criteria	Exempt/Required
Design Review Component			
3.2. Background Network Travel Demands		Only require Network Demand Forecasting Modules if one or more of these modules are triggered	Required
3.3. Demand Rationalization		Only require Network Demand Forecasting Modules if one or more of these modules are triggered	Required
4.1. Development Design	4.1.1. Development for Sustainable Modes	All	Required
	4.1.2. Circulation and Access	All site plan and zoning by-law applications	Required
4.2. Parking	4.2.1. Parking Supply	All plans of subdivision	Required
4.3. Boundary Street Design		All	Required
Network Impact Component			
4.6. Neighborhood Traffic Management	4.6.1. Adjacent Neighborhoods	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	Exempt
4.7. Transit	4.7.1. Transit Route Capacity	Only required if greater than 75 peak hour site-generated transit trips are generated	Exempt
	4.7.2. Transit Priority Requirements	Only required if greater than 75 peak hour site-generated auto trips are generated	Required
4.8. Network Concept		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	only required if greater than 75 peak hour site-generated auto trips are generated	Required
	4.9.2. Intersection Design	only required if greater than 75 peak hour site-generated auto trips are generated	Required

3. Forecasting

3.1 Development Generated Travel Demand

3.1.1 Trip Generation and Mode Shares

The proposed development consists of a two-storey elementary school. Trips generated by the elementary school have been estimated based on the most up-to-date information provided by the school board, using first principles analysis based on information provided by CEPEO. CEPEO indicates that the proposed elementary school is anticipated to provide capacity for 403 elementary students with approximately 50% of the student population anticipated to arrive by school bus, and 50% by auto-passenger trips for student drop-offs. CEPEO also indicates that the proposed school is anticipated to have 40 employees. Daycare person trip generation is based on the capacity of approximately 40 children.

The 2020 TRANS Trip Generation Manual[1] includes mode share assumptions for elementary but recommends that mode shares be developed on a site-specific basis if additional information is available from the school or school board. The Mode share for Employee trips has been based on the Employment Generator Mode Shares from the 2020 TRANS Trip Generation Manual for the Orleans District. **Table 4** provides a summary of the person trip generation for all the uses on the site.

Table 4: Trip Generation and Mode Share

	Auto Driver	Auto Passenger	School Bus	Public Transit	Walking & Cycling
Students	0%	45%	50%	0%	5%
Employees	85%	10%	0%	0%	5%
Daycare Children	0%	100%	0%	0%	0%
Person Trips					
Students	0	181	202	0	20
Employees	34	4	0	0	2
Daycare Children	0	40	0	0	0
Total Person Trips	**34**	**225**	**202**	**0**	**22**

The person trip generation above represents the student and employee trip generation in terms of arrivals to the school site in the morning and departures in the afternoon. The person trips then convert to vehicle trips to reflect the vehicle volumes added to the surrounding road network. Auto driver trips by employees represent one vehicle arrival in the morning and one departure in the afternoon. Employee auto trips have been calculated based on a vehicle occupancy of 1.0. No additional vehicle trips have been added to reflect staff auto passenger trips as it is anticipated these will be combined with staff auto driver arrivals (carpooling). Auto-passenger trips for students drop-offs represent one auto arrival and one auto departure from the site during the AM and PM peak hours. Vehicle trips were calculated from the auto passenger person trips assuming a vehicle occupancy of 1.2, reflecting some families who will drop off multiple children in one trip.

CEPEO indicates that approximately 5-7 buses will operate during each peak hour period (Estimating about 25 students at the full capacity of the bus). To maintain a conservative estimate, 10 school buses are generated during both peak hour periods. CEPEO has also indicated that the operation hours of the elementary school will be from 7:30 AM to 4:00 PM. The start and end time of the school generally align with the peak hours of the adjacent street traffic. Note that school student/employee arrivals/departures will be concentrated just before and after the opening and closing bells, before and after trips may be more distributed. Given the peak hours at the adjacent intersection to the proposed school site of 8:00-9:00 AM and 3:15-4:15 PM from the provided traffic count, the proportions of the site-generated vehicle trips falling within the commuter peak hours have been estimated based on the following:

- 70% of auto trips arriving during the AM peak hour are generated by the employees and parent drop-offs.
- 50% of auto trips departing the school during the PM peak hour, reflecting a wider distribution of parent pick-up between the end of the school day and after-school programs and a wider distribution in employee departure times at the end of the day.
- 100% of school bus arrivals/departures during the AM/PM peak hour.

[1] Provided by City of Ottawa (June 29, 2023)

The analysis is based on all auto trips generated by the school to be primary trips added to the road network. The total peak hour vehicle trips generated by the proposed school are summarized in **Table 5**.

Table 5: Total Site Vehicle Trip Generation

	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
Auto Trips	212	188	85	99
School Buses	8	8	8	8
Total Trips	**220**	**196**	**93**	**107**

To maintain a conservative analysis, the number of trips generated by the proposed school using ITE Trip Generation Manual (11th Edition) was also reviewed and compared. Vehicle trips generated by the proposed school were estimated using rates from the Elementary School land use ('Student' as the independent variable). This approach was requested by the City staff for the purpose of this report because the student independent variable estimates all auto trips associated with the elementary school including auto trips from employees. The estimated number of vehicle trips generated by the proposed development is summarized in **Table 6**.

Table 6: ITE Trip Gen – Elementary School

Land Use	ITE Code	Independent Variable	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
Elementary School	520	403 Students	161	137	30	35
Day care Center	565	40 Children	17	15	15	17
		Vehicle Trips	**178**	**152**	**45**	**52**
		School Buses	8	8	8	8
		Total Trips	**186**	**160**	**53**	**60**

The proposed elementary school is estimated to generate 330 vehicle trips during the AM peak hour (including 178 inbound trips and 152 outbound trips), and 97 vehicle trips during the PM peak hour (including 45 inbound trips and 52 outbound trips). **Table 7** below shows the comparison between the first principles approach and the ITE methodology.

Table 7: Trip Generation Method Comparison

Land Use	Method	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out
Elementary School	First Principal Approach based on CEPEO	220	196	93	107
	ITE Generation Manual, 11th Edition	186	160	53	60

3.1.2 Trip Distribution

The study area trip distribution was developed using the Orleans area TRANS 2011 OD Final Report[2], and considering the location of the subject site, its ease of access from major area roadways, and the location of adjacent development that is likely to create Elementary school trips. The pre-consultation meeting notes indicate that the temporary access of Willow Aster Circle to Mer-Blueue Road will be closed beyond 2028, and that Jérome Jodoin Drive will be connected south to Mer-Bleue Road. Based on the surrounding road network configuration and existing traffic patterns, the overall distribution has been assigned to the network.

According to TRANS 2011 OD Final Report, the destination for travel from the zone is within the zone. The destinations are evenly populated through adjacent districts near Orleans which are located directly west. Based on the current state of land development (observed during a recent site visit), the only trip generators around the elementary school are the parents who will travel predominately from the west and will pick-up/drop-off their kids during the peak hours. The overall distribution has been assigned to the network as follows:

- 10% to/from Brian Coburn Blvd. to the east
- 10% to/from Renaud Road
- 55% to/from Mer-Bleue Road to the north
- 25% to/from Mer-Bleue Road to the south

The AM and PM peak hour site-generated traffic distribution and school bus trip distribution considering the location of the proposed school bus lay-bys is presented in the cardinal directions in **Figure 7** and **Figure 8**, respectively.

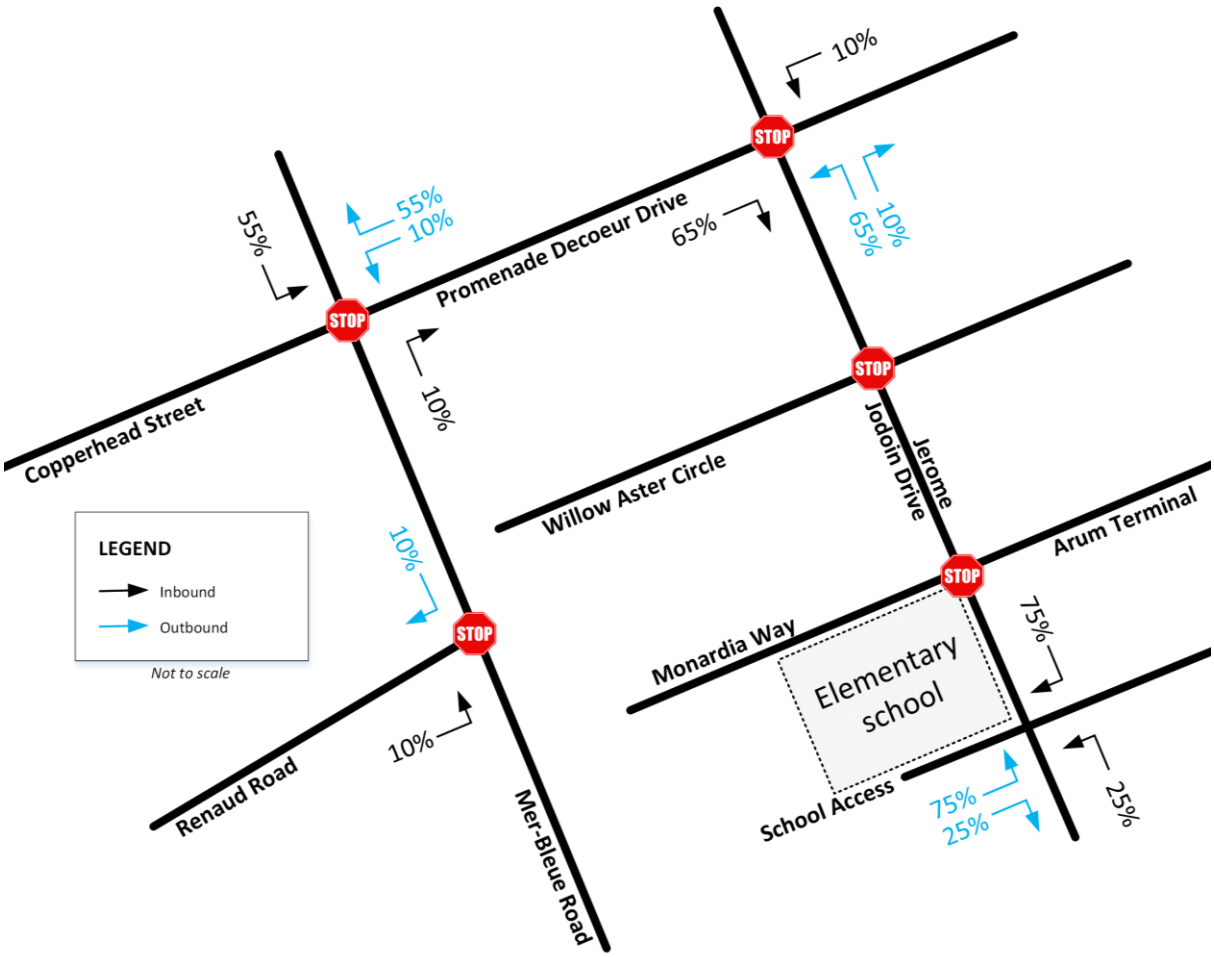


Figure 7: AM and PM Peak Hour Site Generated Trips Distribution

[2] TRANS 2011 O-D Final Report completed in 2011 by City of Ottawa.

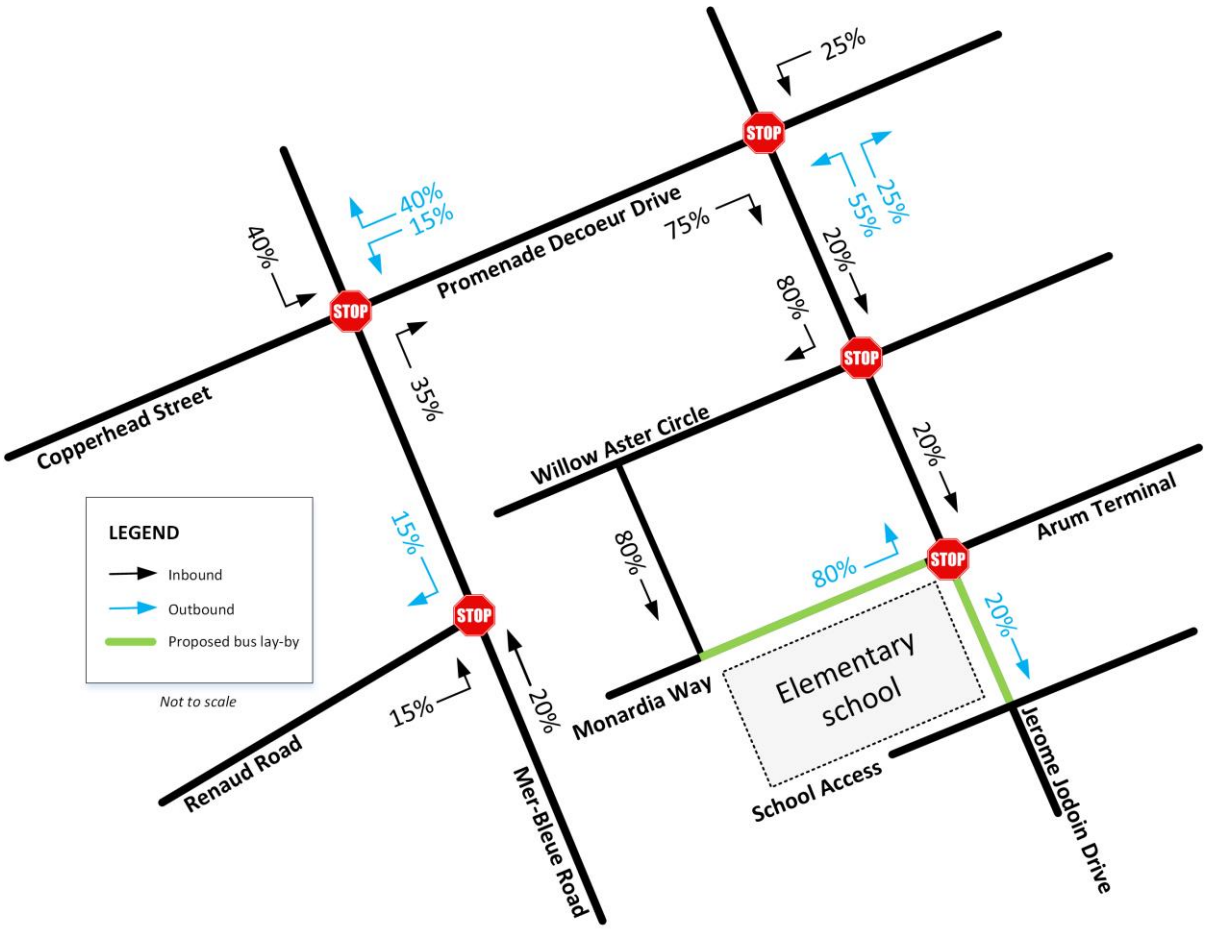


Figure 8: School bus trip distribution proposed site generated volume

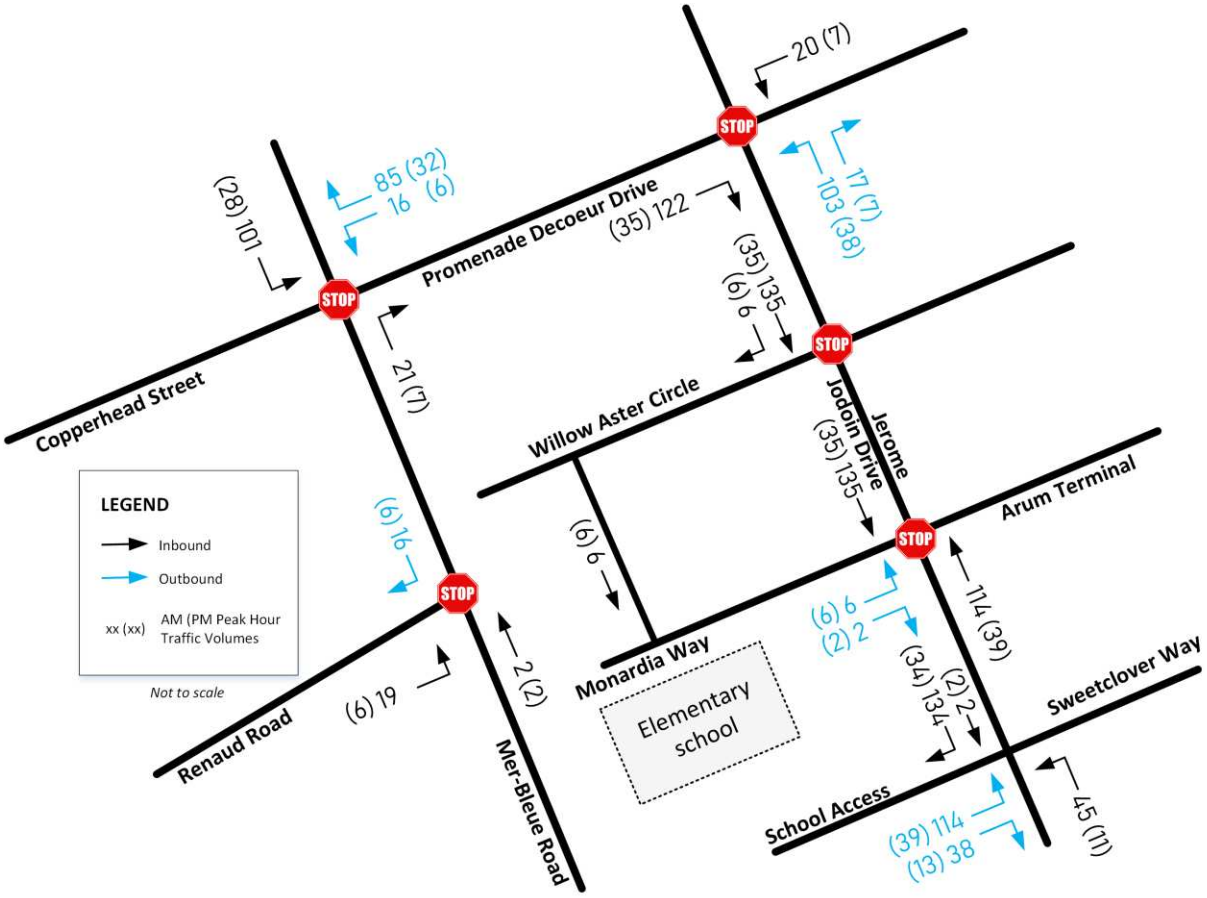


Figure 9: Proposed Site Generated Volumes (Including school bus trips)

4. Analysis

4.1 Development Design

Pedestrian facilities will be provided between the main school entrances and the sidewalks along Monardia Way and Jérome Jodoin Drive. Pedestrians from the subdivision will be able to enter/exit the subject site via existing sidewalks along those two mentioned boundary roads. It is noted that existing sidewalk facilities are fully provided along all boundaries of the proposed school site.

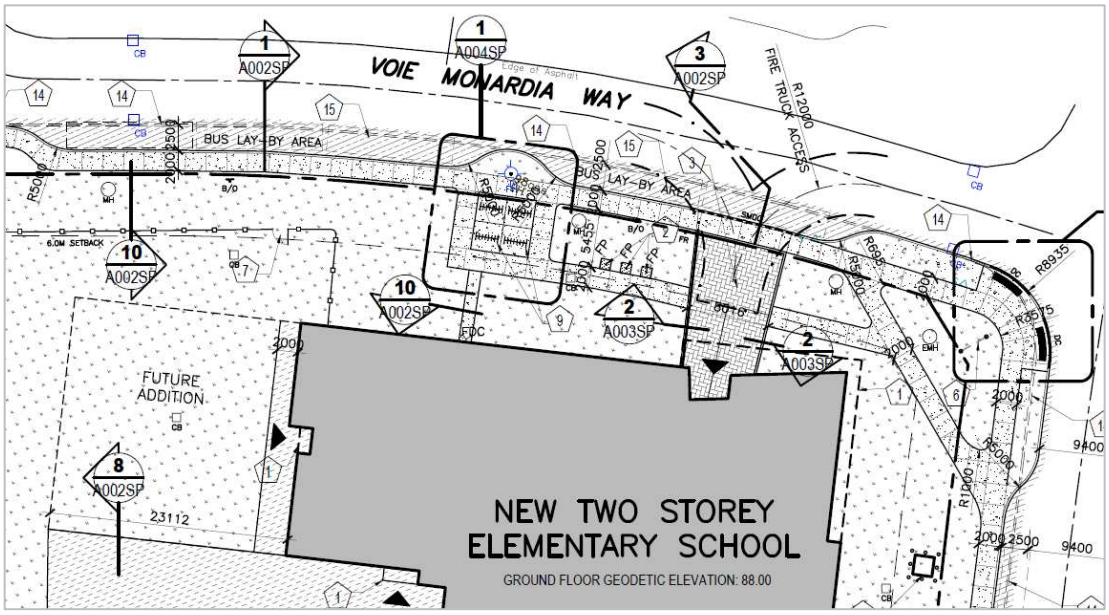


Figure 10: Site Plan showing Pedestrian Facilities

Vehicle parking is proposed in a surface parking lot. A total of 49 parking including 2 accessible parking spaces will be provided at the initial build-out, meeting the minimum spaces required outlined in the by-law. Fifty-four (54) bicycle parking spaces will be provided which also meets the City's By-law requirements.

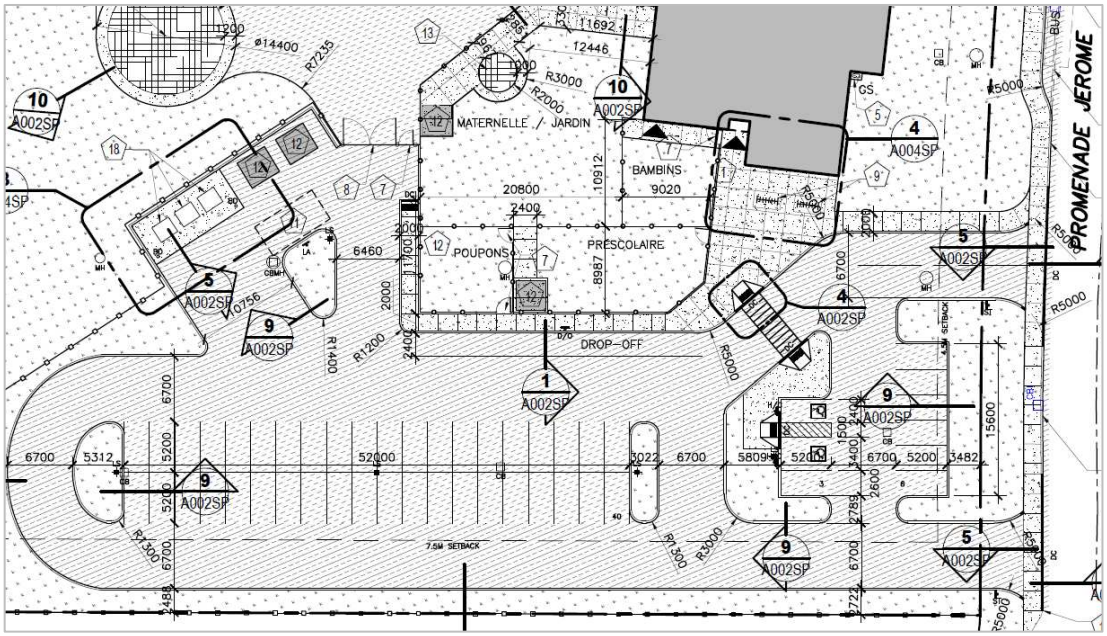


Figure 11: Site Plan showing Parking Facilities

Transit service within the area is provided by OC Transpo. Within the study area, the site could be serviced by Route 32. Due to the anticipated limited use of transit service by the proposed development, it is unlikely that the site would have any significant impact on the existing transit network. All students attending the school and will arrive/depart by bus and will take school buses rather than transit. The site is not expected to generate any significant amount of transit trips on its own.

A review of the Transportation Demand Management (TDM) – Supportive Development Design and Infrastructure Checklist has been conducted. A copy of the TDM checklist is included in **Appendix D.** All required TDM-supportive design and infrastructure measures in the TDM checklist are met. In addition to the required measures, the proposed school also meets the following 'basic'or 'better' measures as defined in the TDM-Supportive Development Design and Infrastructure Checklist:

- Locate building close to the street, and do not locate parking areas between the street and building entrances;
- Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations;
- Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort;
- Provide safe, direct, and attractive walking routes from building entrances to nearby transit stops.

4.2 Circulation and Access

There are two full-movement accesses proposed along Jérome Jodoin Drive. The number of accesses and their location are in accordance with the City's Private Approach By-law. A geometric analysis of the proposed site plan was undertaken utilizing truck templates for the following two design vehicles: Waste Collection and Fire Truck. The design of the development's new accesses allows for large trucks to enter from Jérome Jodoin Drive and exit back onto Jérome Jodoin Drive without the need for multipoint turnaround movements. The vehicle swepth path analysis confirms that the site layout and access configuration are sufficient to accommodate each of the design vehicles mentioned above.

The vehicle turning templates described have been provided in **Appendix E**. These turning templates include the path for school bus exiting lay-by making turning maneuvers at the Monardia Way and Jerome Jodoin Drive intersection.

A bus lay-by is proposed on the south side of Monardia Way, and west side of Jérome Jodoin Drive, for pick-ups and drop-offs. This proposed lay-by will have a width of 2.5m and a parallel length of approximately 80m and 55m respectively. A sidewalk width of 2.0m will be provided along the lay-by and will connect the lay-by to the school entrances along Monardia Way. The lay-by will be directly adjacent to the sidewalk which will ensure that school buses are picking students up or dropping them off in a safe manner.

4.3 Parking Supply

The subject site is located in Area C on Schedule 1 and 1A of the City of Ottawa's Zoning By-Law. Minimum vehicular and bicycle parking rates for the proposed uses are identified and summarized in the following **Table 8.**

Table 8: Parking Requirement Per Zoning By-Law

Land Use	Rate	Units/GFA	Required
Minimum Vehicle Parking			
Elementary School	1.5 per classroom	2,298 m^2	24
Future Portable Classroom	1.5 per classroom	856 m^2	18
Daycare	2 per 100 m^2	262 m^2	6
		Proposed Vehicle Parking	**49 Total**
Minimum Bicycle Parking			
Elementary School	1 per 100 m^2 of gross floor area	2,298 m^2	23
Future Portable Classroom	1 per 100 m^2 of gross floor area	856 m^2	9
Daycare	1 per 250 m^2 of gross floor area	262 m^2	2
		Proposed Bicycle Parking	**54 Total**

The proposed development will include 49 parking spaces in a parking lot accessible via Jérome Jodoin Drive, meeting the minimum Zoning By-law 2008-250 Consolidation parking requirements. As the proposed supply of on-site parking meets or exceeds the By-law requirement, no further review of vehicular parking is required. A total of 54 bicycle parking spaces are proposed, meeting the minimum Zoning By-law 2008-250 Consolidation parking requirements for all land uses in the Site Plan.

4.4 Boundary Street Design

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

Targets for Pedestrians, Bicyclists, Transit, and Truck LOS for the boundary roadways adhere to those outlined in Exhibit 22 of the MMLOS guidelines. The boundary streets review evaluates the MMLOS for all boundary roadways based on existing conditions. **Table 2** summarizes the findings of the Segment MMLOS for Existing (2023) conditions.

Table 9: Segment MMLOS – Existing (2023) Conditions

	LEVEL OF SERVICE BY MODES			
Segments	**Pedestrian (PLOS)**	**Bicyclist (BLOS)**	**Transit (TLOS)**	**Truck (TkLOS)**
Monardia Way	B	A	D	B
Jérome Jodoin Drive	B	A	D	B
Target	**C**	**B**	**D**	**N/A**

Given the development is an urban general area, the target level of service for pedestrians and bicyclist is high (PLOS 'C' and BLOS 'B'). As shown in **Table 2**, the target levels of service for all modes are met.

According to the City of Ottawa's Cycling Network Plan, the study area road network is not in the included in any regional cycling facilities. It should be noted that the detailed design of the proposed turning lanes along Jérome Jodoin Drive will be finalized as part of the detailed design process. Detailed Segment MMLOS calculations can be found in **Appendix F.**

4.5 Access Intersections Design

Two accesses to the development are proposed onto Jérome Jodoin Drive. Both accesses will be located near a pre-existing access along west side of Jérome Jodoin Drive. The access width is proposed to be 7 m, and a sidewalk width of 2 m.

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

Both accesses will only require stop controls at their respective intersections. The operations analysis conducted in section 4.8 indicate no issues with capacity or queuing at either access. No changes are proposed to the existing temporary turnaround at the south end of Jérome Jodoin Drive. Accordingly, the existing temporary transit operations are unchanged.

4.6 Neighborhood Traffic Management

Site traffic will be accommodated by Jérome Jodoin Drive and Mer-Blueue Road. No modifications are required on either to limit the impact on surrounding local roadways.

4.7 Transit

Due to the nature of the development, transit trips are not anticipated to be generated by the subject elementary school. OC Transpo route #32 travels on 30-minute headways during the weekdays. The existing transit services in the study area are anticipated to be sufficient to accommodate the demand from the proposed development.

4.8 Intersection Design

This section will determine the design elements of the study area intersections required to accommodate the proposed development, ensuring they are consistent with the City of Ottawa's complete streets philosophy and MMLOS practices. The MMLOS guidelines produced by IBI Group in October 2015 were used to evaluate the LOS of the signalized study area intersections for each mode of transportation. Since all the study area intersections are un-signalized intersections, Intersection MMLOS analysis has been waived.

4.8.1 Future Background Traffic Volume

The background traffic volumes are based on the 2023 traffic volumes, adjusted to reflect an annual background growth rate of 2.0%. **Figure 12** and **Figure 13** illustrates the 2024 & 2029 background traffic volume at the study area, respectively.

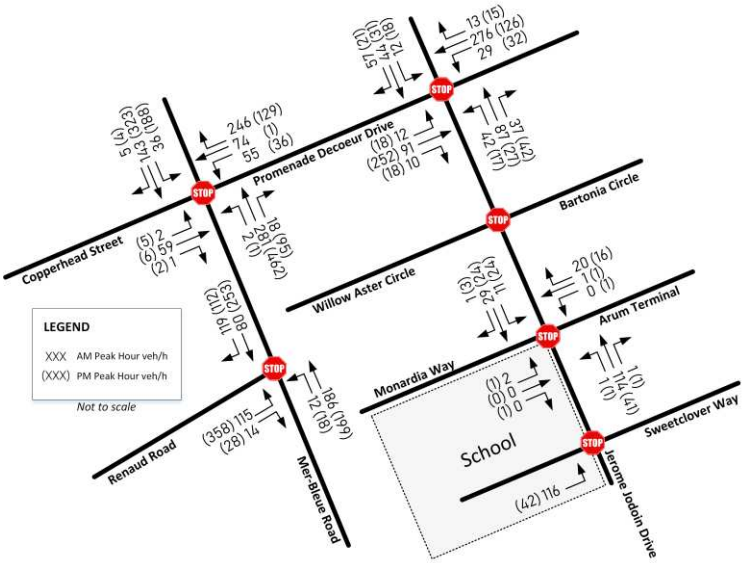


Figure 12: 2024 Background Traffic Volume

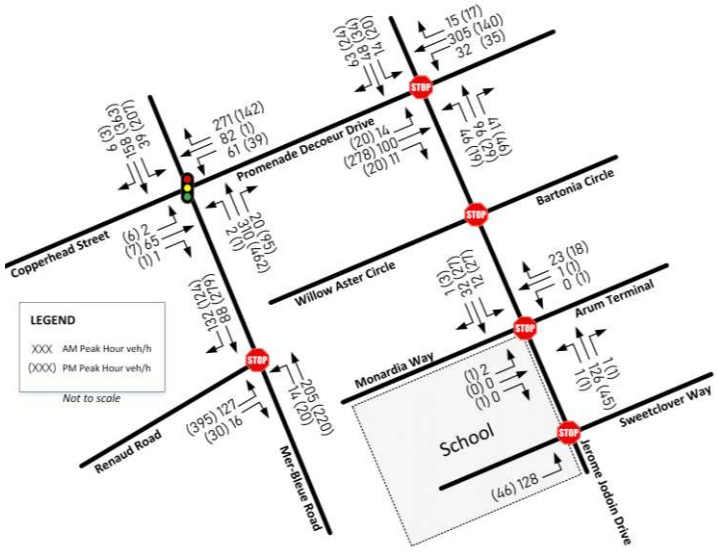


Figure 13: 2029 Background Traffic Volume

4.8.2 Future Total Traffic Volume

The total traffic volumes are based on the 2023 traffic volumes, adjusted to reflect an annual background growth rate of 2.0 %. The 2024 & 2029 horizon year analysis for the proposed development access was conducted using the volume shown in **Figure 14** and **Figure 15**, respectively.

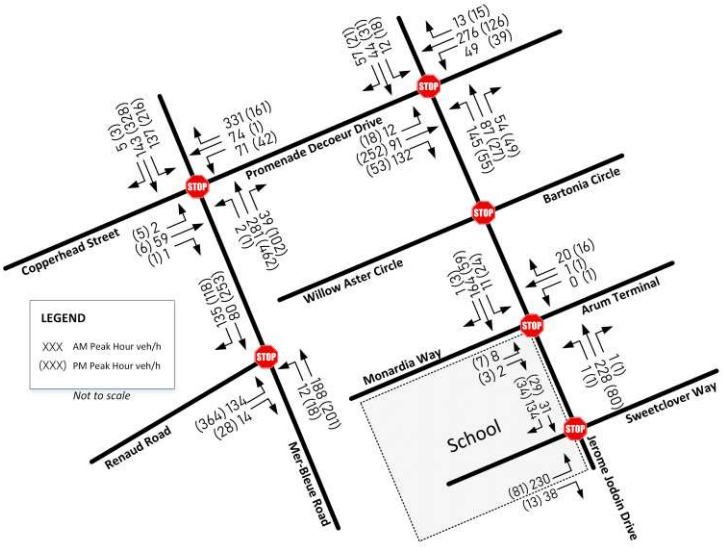


Figure 14: 2024 Total Traffic Volume

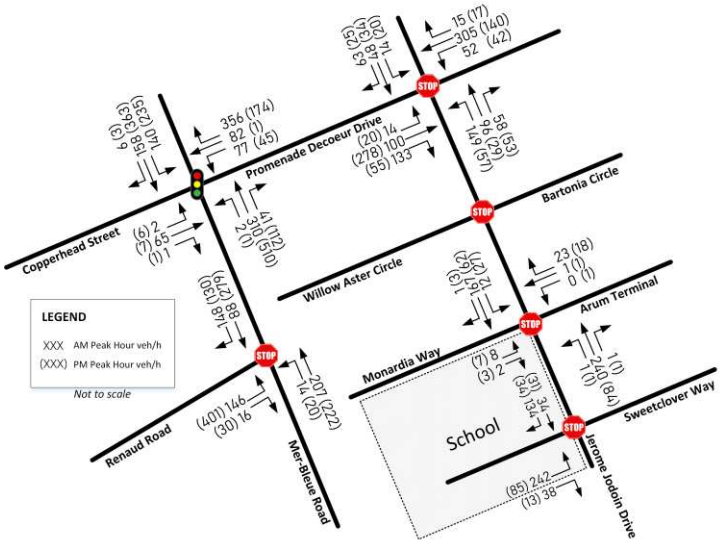


Figure 15: 2029 Total Traffic Volume

4.8.3 Future Background Intersection Operations

Intersection capacity analysis has been completed for the 2024 & 2029 background traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl[3], Peak Hour Factor: 1.0 for future conditions). **Table 10** summarizes the results of the Synchro analysis for the 2024 & 2029 background traffic conditions. It should be noted that the roundabout analysis at Jérome Jodoin Drive/Décoeur Drive has been conducted using SIDRA software.

Table 10: 2024 & 2029 Background Intersection Operations

Intersection		AM Peak Hour					PM Peak Hour				
		Critical Movement	Max v/c	LOS	Delay (s)	95th Queue (m)	Critical Movement	Max v/c	LOS	Delay (s)	95th Queue (m)
2024	Mer Bleue Rd. / Promenade Décoeur	WB-LTR	0.68	C	22.6	40.1	WB-LTR	0.43	C	21.0	15.8
	Mer Bleue Rd. / Renaud Rd.	NB-LT	0.28	A	9.3	-	EB-LR	0.61	C	16.9	-
	Jérome Jodoin Dr. / Promenade Décoeur	WB-LTR	0.27	A	8.2	11.8	EB-LTR	0.23	A	7.8	9.4
	Willow Aster Cir./ Promenade Décoeur	EB-LTR	0.07	B	10.7	1.7	EB-LTR	0.09	B	10.0	2.1
	Jérome Jodoin Dr./ Monardia Way	WB-LTR	0.03	A	9.1	0.6	WB-LTR	0.02	A	8.7	0.5
	Jérome Jodoin Dr./ School Access	EB-LR	0.13	A	9.2	3.4	EB-LR	0.04	A	8.8	8.8
2029	Mer Bleue Rd. / Promenade Décoeur	WB-LTR	0.80	B	19.7	39.6	WB-LTR	0.57	B	14.8	17.5
	Mer Bleue Rd. / Renaud Rd.	NB-LT	0.32	A	9.8	-	EB-LR	0.69	C	21.0	-
	Jérome Jodoin Dr./ Promenade Décoeur	WB-LTR	0.30	A	8.3	13.7	EB-LTR	0.25	A	7.8	10.8
	Willow Aster Cir./ Promenade Décoeur	EB-LTR	0.08	B	11.0	2.0	EB-LTR	0.10	B	10.3	2.5
	Jérome Jodoin Dr./ Monardia Way	WB-LTR	0.03	A	8.8	0.7	WB-LTR	0.02	A	8.7	0.5
	Jérome Jodoin Dr./ School Access	EB-LR	0.15	A	9.3	3.9	EB-LR	0.05	A	7.4	-

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

As shown in **Table 10**, all have been found to operate at an acceptable level and within City standards. All other intersections are anticipated to operate with a LOS C or better during the weekday AM and PM peak hours. Detailed Synchro reports are included in **Appendix G**.

[3] vehicles per hour per lane

4.8.4 Future Total Intersection Operations

Intersection capacity analysis has been completed for the 2024 & 2029 total traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (Saturation Flow rate: 1800 vphpl, Peak Hour Factor: 1.0 for future conditions). **Table 11** summarizes the results of the Synchro analysis for both horizons total traffic conditions. It should be noted that the roundabout analysis at Jérome Jodoin Drive/ Promenade Décoeur Drive roundabout has been conducted using SIDRA software.

Table 11: 2024 & 2029 Total Intersection Operations

Intersection		AM Peak Hour					PM Peak Hour				
		Critical Movement	Max v/c	LOS	Delay (s)	95th Queue (m)	Critical Movement	Max v/c	LOS	Delay (s)	95th Queue (m)
2024	Mer Bleue Rd. / Promenade Décoeur	WB-LTR	1.11	F	103.4	134.7	WB-LTR	0.56	D	26.6	24.8
	Mer Bleue Rd. / Renaud Rd.	NB-LT	0.29	A	9.6	-	EB-LR	0.62	C	17.7	-
	Jérome Jodoin Dr./ Promenade Décoeur	WB-LTR	0.32	A	8.9	14.7	EB-LTR	0.25	A	7.8	10.9
	Willow Aster Cir./ Promenade Décoeur	EB-LTR	0.11	B	14.1	2.7	EB-LTR	0.10	B	10.8	2.4
	Jérome Jodoin Dr./ Monardia Way	WB-LTR	0.03	B	10.0	0.7	WB-LTR	0.02	A	9.0	0.5
	Jérome Jodoin Dr./ School Access	EB-LR	0.34	B	11.2	11.4	EB-LR	0.10	A	9.2	2.5
2029	Mer Bleue Rd. / Promenade Décoeur	WB-LTR	0.86	C	22.4	53.8	WB-LTR	0.57	B	14.8	17.5
	Mer Bleue Rd. / Renaud Rd.	NB-LT	0.32	A	9.8	-	EB-LR	0.62	B	14.9	19.0
	Jérome Jodoin Dr./ Promenade Décoeur	WB-LTR	0.36	A	9.1	17.0	EB-LTR	0.28	A	8.0	12.4
	Willow Aster Cir. / Promenade Décoeur	EB-LTR	0.12	B	14.7	3.2	EB-LTR	0.11	B	11.0	2.8
	Jérome Jodoin Dr./ Monardia Way	WB-LTR	0.04	B	10.1	0.9	WB-LTR	0.02	A	9.1	0.5
	Jérome Jodoin Dr./ School Access	EB-LR	0.41	B	13.1	15.4	EB-LR	0.11	A	9.4	2.7

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

As shown in **Table 11**, all have been found to operate at an acceptable level and within City standards except for the westbound movement at Mer Bleue Road / Promenade Decoeur Drive intersection in 2024 total traffic condition during AM peak hour. It is expected to have a greater delay and queuing during AM peak hour period.

The updated changes by implementing a signal at the Mer Bleue Road / Promenade Décoeur Drive intersection in 2029 horizon year will have a positive effect on the road network and major improvements are seen in the delays and v/c ratios. Signal timings were adjusted to 60 seconds for both peak hour periods to account for the existing geometric in the road network, cycle lengths and split phases were optimized in Synchro.

Detailed Synchro reports are included in **Appendix G**. The modified signal timings report can be provided upon request.

4.8.5 Left Lane Warrant Analysis

During the field visit on June 29, 2023, we observed there is no southbound left turn lane provided at Mer Bleue Road / Promenade Décoeur Driver intersection. When southbound drivers were waiting in the first lane to complete their left turn, drivers must either wait or merge right. These issues may be exacerbated once Copperhead Street is officially opened and once the subdivision on the west side of Mer-Bleue Road is completed.

Based on the future total volumes, a warrant for an exclusive southbound left turn lane at the same intersection was analyzed as per MTO Geometric Design Standards for Ontario Highways. The results of the warrant analysis are illustrated in **Table 12**.

Table 12: MTO Left Turn Lane Warrant Analysis (Southbound Left Turn at Mer Bleue Rd. / Promenade Decoeur Dr.)

Intersection	2024 Horizon Year		2029 Horizon Year	
	AM Peak	PM Peak	AM Peak	PM Peak
V_L=	137	216	140	235
V_A=	143	328	158	363
V_O=	281	462	310	510
Left Turn % =	95%	65%	90%	65%

Through analysis of the southbound left-turn lane warrants at the Mer Bleue Rd. / Promenade Décoeur Drive intersection, it was determined that the addition of a southbound left-turn lane would be warranted in all future 2024 & 2029 total conditions for both peak hour periods. Based on the simulation result from SimTraffic, at least 80 m of storage length for the southbound left turn lane is required and subject to further design considerations.

5. Conclusion and Recommendations

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

Development Design and Parking

- Pedestrian facilities will be provided between the proposed elementary school site and existing sidewalks provided in the study area. A connection to the sidewalk along Jérome Jodoin Drive will be provided, as shown on the site plan. Sidewalks will be continuous and depressed across accesses within the study area.
- With the 49 proposed vehicular parking spaces (including 2 accessible parking spaces), 54 proposed bicycle parking spaces will meet the requirement of the City of Ottawa's Zoning By-Law.
- OC Transpo Route #32 is located within a 400 m walking distance of the proposed elementary school.

Access Design

- The proposed development will be served by two all-movement accesses along Jérome Jodoin Drive. These accesses will be approximately 7 m in width and will meet all requirements of the City's Private Approach By-Law.
- A bus lay-by is proposed on the south side of Monardia Way, and west side of Jérome Jodoin Drive, for pick-ups and drop-offs. The lay-by will be directly adjacent to the sidewalk which will ensure that school buses are picking students up or dropping them off in a safe manner.

Boundary Street Segment MMLOS

- All boundary streets within the study area meet the target segment level of service.

Intersection MMLOS

- It is not required as all study area intersections are un-signalized.

Background Traffic Conditions

- A 2.0 % growth rate was applied to the study area road network. All other intersections are anticipated to operate with a LOS C or better during the weekday AM and PM peak hours.

Total Traffic Conditions

- A 2.0 % growth rate was applied to the study area road network. All other intersections are anticipated to operate with a LOS E or better during the weekday AM and PM peak hours, except for the westbound movement at the Mer Bleue Road / Promenade Decoeur Drive intersection, which continues to operate in level of service 'F' during 2029 AM peak hour. The poor level of service at the Mer Bleue Road/Promenade Décoeur intersection can be mitigated by implementing either signalized control, which will have a positive effect on the road network and major improvements will be seen in the delays and v/c ratios.

Left Lane Warrant Analysis

- The addition of a southbound left-turn lane would be warranted in all future 2024 & 2029 total traffic conditions for both peak hour periods at the Mer Bleu Road/Promenade Décoeur intersection if the intersection's current configuration is maintained. Modifications at this intersection would be best coordinated as part of planned roadway improvements along Mer Bleue Road or in conjunction with improvements required to service the residential development (Copperhead Street) along the west side of the roadway.

Appendix

Appendix A Complete Screening Form
Appendix B The Proposed Site Plan
Appendix C Peak Hour Summary Sheet
Appendix D Transportation Demand Management Checklist
Appendix E Swept Path Vehicle Turning Templates
Appendix F Detailed Segment MMLOS Calculation
Appendix G Detailed Synchro Report
Appendix H RMA Report Figures

Appendix A

Completed Screening Form

Certification Form for TIA Study PM

TIA Plan Reports

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

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

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

CERTIFICATION

- ☑ I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
- ☑ I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- ☑ I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
- ☑ I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise
  - ☑ is either transportation engineering
  - ☐ or transportation planning .

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

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

Dated at Ottawa (City) this 16 day of May, 20 23.

Name : Rick Zarzosa

Professional title: Senior Traffic and Transit Engineer

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

Office Contact Information (Please Print)	
Address:	2650 Queensview Dr Suite 100
City / Postal Code:	K2B 8H6
Telephone / Extension:	343-804-4894
E-Mail Address:	Rick.Zarzosa@exp.com

Stamp

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	2405 Mer Bleue Rd
Description of Location	SW corner of the Monardia Way and Jerome Jodoin Dr. intersection
Land Use Classification	Elementary School
Development Size (units)	N/A
Development Size (m^2)	4,000 GFA
Number of Accesses and Locations	two in & out access driveways to the south
Phase of Development	One Phase
Buildout Year	2024

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

2. Trip Generation Trigger

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

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

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

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

4,000 sq m GFAr. number of trip generation during AM peak: 300
number of trip generated during PM peak: 59
Trip genration trigger is satisfied

3. Location Triggers

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

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

4. Safety Triggers

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

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

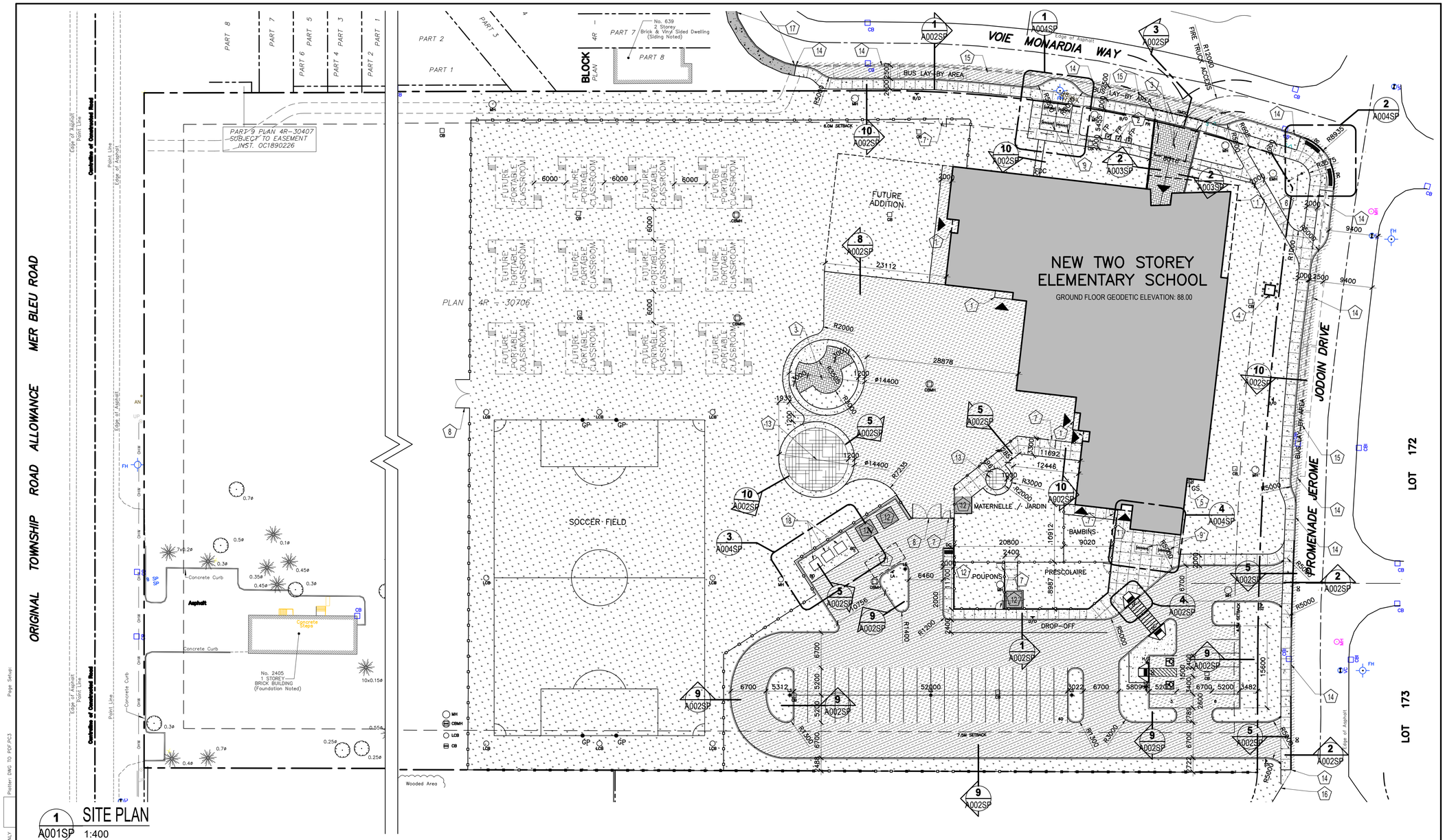
5. Summary

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

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).

Appendix B

The Proposed Site Plan



1 SITE PLAN
A001SP 1:400

SITE DATA

SITE AREA	40,483.9 m²
FOOTPRINT	
NEW SCHOOL FOOTPRINT	2,371.0 m²
PORTABLES FOOTPRINT	856.4 m²
SCHOOL W/ PORTABLES FOOTPRINT	3,227.4 m²
GROSS FLOOR AREA	
(AS PER CITY OF OTTAWA ZONING BY-LAW DEFINITION)	
NEW SCHOOL G.F.A. (INCLUDING DAYCARE)	2,560.4 m²
PORTABLES GROSS FLOOR AREA	856.4 m²
SCHOOL W/ PORTABLES GROSS FLOOR AREA	3,416.8 m²

TOPOGRAPHICAL AND SURVEY INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
LEGAL DESCRIPTION: PART OF LOT 4, CONCESSION 11, Geographic Township of Cumberland, CITY OF OTTAWA

CITY OF OTTAWA ZONING

REQUIRED			PROVIDED
INSTITUTIONAL ZONE I1A(2530)			
LOT AREA	MIN.	400m²	40,483.9m²
FRONT YARD SETBACK	MIN.	6.0m	7.74m
CORNER SIDE YARD SETBACK	MIN.	4.5m	8.56m
INTERIOR SIDE YARD SETBACK	MIN.	7.5m	254.81m
REAR YARD SETBACK	MIN.	7.5m	45.09m
HEIGHT OF BUILDING	MAX.	20m	9.2m
LANDSCAPING PROVISION FOR PARKING LOTS	MIN.	15%	21%

PARKING CALCULATIONS

MOTOR VEHICLE PARKING

	USE	No. CLASS	SPACES PER	SPACES REQ'D
REQUIRED	ELEMENTARY SCHOOL	16	1.5/classroom	24
	FUTURE PORTABLE CLASSROOMS	12	1.5/classroom	18
	DAYCARE	262.0 m²	2/ 100 m²	6
	TOTAL REQUIRED PARKING SPACES			48 SPACES
	TOTAL REQUIRED ACCESSIBLE PARKING SPACES			1 SPACE
PROVIDED	SPACES @ 5.2mD X 2.6mW			47 SPACES
	TYPE A ACCESSIBLE PARKING SPACES @ 5.2mD X 3.4mW			1 SPACE
	TYPE B ACCESSIBLE PARKING SPACES @ 5.2mD X 2.4mW			1 SPACE
	TOTAL SPACES PROVIDED			49 SPACES

BICYCLE PARKING

	USE	GROSS AREA	SPACES PER	SPACES REQ'D
REQUIRED	SCHOOL	2,298.4 m²	1 per 100 m² of gross floor area	23 SPACES
	DAYCARE	262.0 m²	1 per 250 m² of gross floor area	2 SPACES
	PORTABLES	856.4 m²	1 per 100 m² of gross floor area	9 SPACES
	TOTAL REQUIRED BICYCLE PARKING SPACES			34 SPACES
PROVIDED	TOTAL BICYCLE SPACES PROVIDED			54 SPACES

LEGEND

- BARRIER FREE PARKING
- BUILDING ENTRANCE/EXIT
- CURB
- DC — DEPRESSED CURB
- SMDC — SEMI-MOUNTABLE DEPRESSED CURB
- NEW VINYL COATED CHAIN LINK FENCE, 1220 mm HIGH
- NEW VINYL COATED CHAIN LINK FENCE, 1830 mm HIGH
- ROAD CENTER LINE
- FIRE ROUTE
- SET BACK LINE
- PROPERTY LOT LINE
- BD — BOLLARD, SEE DETAIL 6/A002SP
- GP — GOAL POST, SEE DETAIL 4/A003SP
- LS — NEW LIGHT STANDARD, SEE DETAIL 1/A003SP AND ELECTRICAL DRAWINGS
- FH — EXISTING FIRE HYDRANT, SEE SURVEY
- FDC — FIRE DEPARTMENT CONNECTION, REFER TO MECHANICAL DRAWINGS
- MH — NEW MANHOLE, REFER TO CIVIL DRAWINGS
- CBMH — NEW CATCH BASIN MANHOLE, REFER TO CIVIL DRAWINGS
- LCB — NEW LANDSCAPE CATCH BASIN, REFER TO CIVIL DRAWINGS
- CB — NEW CATCH BASIN
- SIB — IRON BAR, REFER TO SURVEY
- FP — FLAG POLE BASE, SEE DETAIL 3/A003SP
- GS — NEW GAS STATION
- FR — FIRE ROUTE SIGN
- H/C — DISABLED PARKING PERMIT (Rb-93)
- D/O — DROP-OFF SIGN
- B/O — BUS LAY-BY ONLY SIGN
- LA — LOADING AREA SIGN
- NEW TWO STOREY ELEMENTARY SCHOOL AND STORAGE SHED
- CONCRETE WALK
- TYPE 1 ASPHALT: HEAVY DUTY
- TYPE 2 ASPHALT: LIGHT DUTY
- NEW SOD AND TOPSOIL (REFER TO LANDSCAPE DRAWING)
- UNIT PAVERS
- ENGINEERED WOOD FIBER
- EXISTING CONCRETE SIDEWALK

SITE PLAN NOTES

1. CANOPY OR 2ND FLOOR ABOVE.
2. FLAGPOLES
3. UNIT PAVERS
4. TRANSFORMER/SWITCHGEAR CONCRETE PAD C/W BOLLARDS AS PER HYDRO ONE STANDARDS. COORDINATE LOCATION AND SIZE WITH ELECTRICAL DRAWINGS AND HYDRO ONE.
5. GAS STATION CONCRETE PAD C/W CHAIN LINK FENCE AND TOP AS PER ENBRIDGE STANDARDS. COORDINATE LOCATION AND SIZE WITH MECHANICAL DRAWINGS AND ENBRIDGE.
6. SCHOOL SIGN, SEE SITE DETAILS.
7. NEW 1500mm WIDE GATE IN CHAIN LINK FENCE
8. NEW 6000mm WIDE DOUBLE GATE IN CHAIN LINK FENCE, C/W FOOTBOLT REST.
9. BIKE RACKS
10. CURB RAMP WITH FLARED SIDES AND DETECTABLE HAZARD INDICATOR, CONSTRUCTED TO CITY OF OTTAWA STANDARDS, SEE SPECIFICATIONS.
11. LOADING SPACE 3.5M x 7m
12. FUTURE STORAGE SHED N.I.C.
13. ENGINEERED WOOD FIBER PLAY AREA, SEE SPECIFICATIONS.
14. EXISTING ROAD CURB AND CONCRETE SIDEWALK TO BE REMOVED. ALSO REFER TO SURVEY DRAWINGS
15. PROVIDE DIAGONAL LINE PAINTING IN THE AREAS OF "BUS LAY-BY", 2500mm WIDE.
16. EDGE OF EXISTING TEMPORARY BUS TURN-AROUND
17. EXISTING CURB AND CONCRETE SIDEWALK TO REMAIN
18. SEMI-BURIED GARBAGE CONTAINER, REFER TO SPEC AND DETAILS

GENERAL NOTES

1. EXTENT OF CONTRACT IS LIMITED TO WITHIN SCHOOL AND PARK PROPERTIES, EXCEPT WHERE SHOWN OTHERWISE.
2. ALL WORK OUTSIDE PROPERTY LINE TO BE CONSTRUCTED TO CITY OF OTTAWA CONSTRUCTION STANDARDS.
3. PARKING STALL SIZE: 2600mm x 5200mm
   ACCESSIBLE PARKING STALL SIZE: 3700mm x 5200mm
4. FOR LANDSCAPING/PLANTING DETAILS SEE DRAWING AS PREPARED BY JAMES B. LENNOX AND ASSOCIATES.
5. FOR SITE GRADING INFORMATION SEE GRADING AND DRAINAGE DRAWING AS PREPARED BY WSP.
6. FOR SITE SERVICES INFORMATION SEE SITE SERVICES DRAWING AS PREPARED BY WSP.
7. FOR SOIL INVESTIGATION REPORT REFER TO REPORT PREPARED BY EXP SERVICES INC.
8. SLOPES OF CONCRETE/PAVING AT DEPRESSED CURBS SHALL NOT EXCEED 5%
9. CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY ERRORS TO THE ARCHITECT. CONTRACTOR TO COORDINATE WITH ALL DRAWINGS.
10. FOR SITE SURVEY INFORMATION, SEE TOPOGRAPHIC SURVEY DRAWINGS AS PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
11. PAINT PAVEMENT MARKINGS: PARKING SPACES AND SYMBOLS, PEDESTRIAN CROSSINGS AND WHERE SHOWN ON DRAWINGS.
12. CONTRACTOR SHALL REINSTATE ALL AREAS AND SITE ITEMS LOCATED OUTSIDE THE PROPERTY LINE DAMAGED AS A RESULT OF NEW CONSTRUCTION.

Conseil des écoles publiques de l'Est de l'Ontario

ISSUE NO.	REV. NO.	DATE YYMMDD	ISSUE
5	2	2024/01/17	ISSUED FOR SITE PLAN CONTROL
4	1	2023/11/24	ISSUED FOR PHASE 3 SITE PLAN PRECONSULTATION
3	0	2023/09/28	ISSUED FOR BUILDING PERMIT
2	0	2023/09/21	ISSUED FOR SITE PLAN CONTROL
1	0	2023/07/19	ISSUED FOR SITE PLAN CONTROL

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EDWARD J. CUHACI & ASSOCIATES ARCHITECTS Inc.
171 Slater St, Suite 100, Ottawa, Ontario, K1P 5H7
Fax: (613) 236-1944 Telephone: (613) 236-7135 E-mail: info@cuhaci.com

PROJECT TITLE/TITRE DU PROJET
ÉCOLE ÉLÉMENTAIRE PUBLIQUE
ORLÉANS SUD
675 MONARDIA WAY
OTTAWA, ONTARIO

CONSEIL DES ÉCOLES PUBLIQUES
DE L'EST DE L'ONTARIO
2445 BOUL. ST-LAURENT, OTTAWA, ON

DRAWING TITLE/TITRE DU DESSIN
SITE PLAN

SCALE ECHELLE	AS SHOWN	PROJ. No 2316	ISSUE No 3 / REV. No 0
DRAWN BY DESSINE PAR	ST/DS	DRAWING/DESSIN	A001SP
CHECKED BY VERIFIE PAR	XF		
DATE	JUNE 2023	ACAD FILE/FICHIER: 2316-A001SP.DWG	

Appendix C

Peak Hour Summary Sheet

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON

Survey Date: Wednesday, June 14, 2023 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Mostly Cloudy 13° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0700-0900 & 1500-1700

Weather PM: Overcast 17° C **Surveyor(s):** T. Carmody

	Monardia Way					Arum Terr.						Jerome Jodoin Dr.					Jerome Jodoin Dr.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	1	0	0	0	1	0	0	19	0	19	20	0	18	0	0	18	6	11	2	0	19	37	57
0800-0900	2	0	0	0	2	0	1	20	0	21	23	1	24	1	0	26	11	22	1	1	35	61	84
1500-1600	2	0	1	0	3	1	1	17	0	19	22	0	21	1	0	22	19	23	2	1	45	67	89
1600-1700	1	0	1	0	2	1	0	13	0	14	16	0	14	0	0	14	16	18	3	0	37	51	67
Totals	6	0	2	0	8	2	2	69	0	73	81	1	77	2	0	80	52	74	8	2	136	216	297

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡					0.88							Highest Hourly Vehicle Volume Between 0700h & 1000h											
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0800-0900	2	0	0	0	2	0	1	20	0	21	23	1	24	1	0	26	11	22	1	1	35	61	84

PM Peak Hour Factor ➡					0.72							Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1515-1615	1	0	1	0	2	1	1	16	0	18	20	0	20	1	0	21	24	24	3	0	51	72	92

Comments:

Transit buses and school buses comprise 95.12% of the heavy vehicle traffic.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

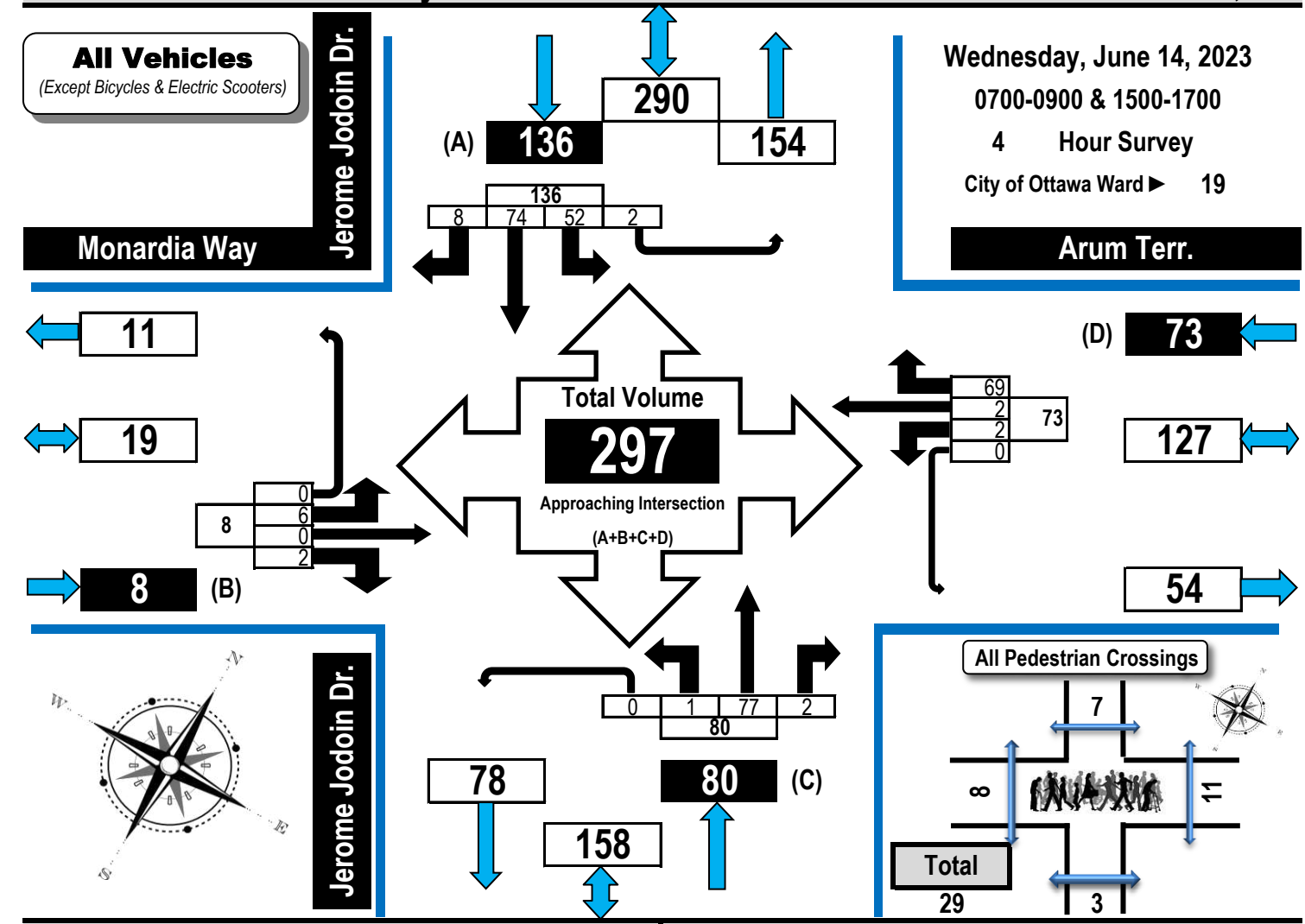
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

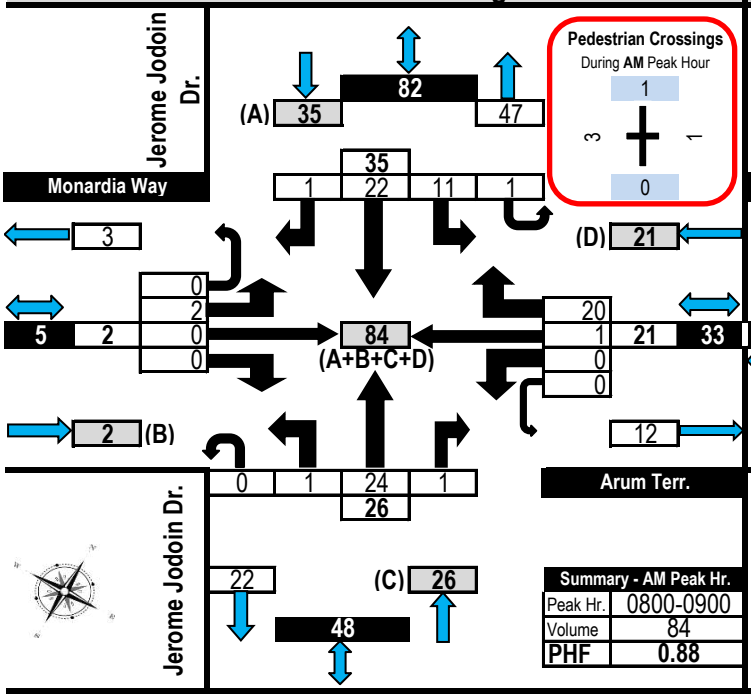
Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, June 14, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ▶ 19

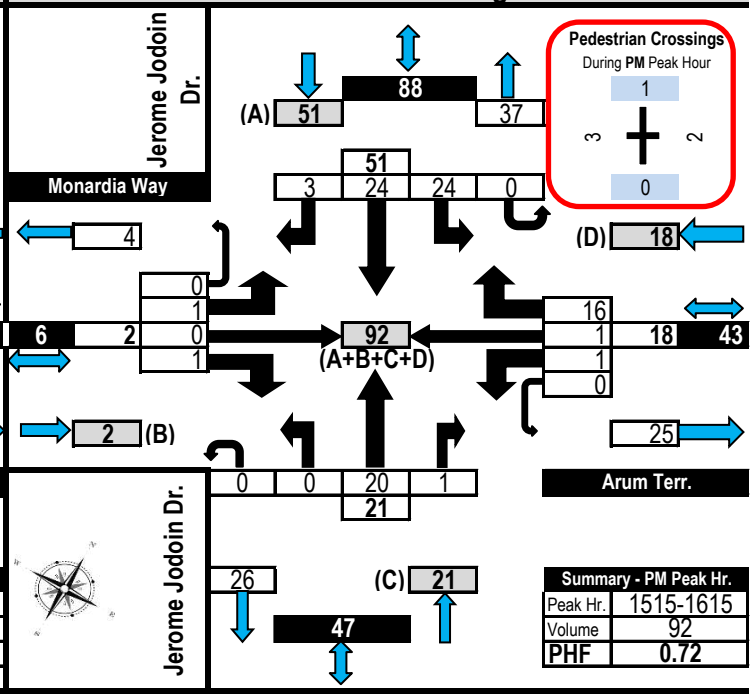


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0800-0900
Volume	84
PHF	0.88

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1515-1615
Volume	92
PHF	0.72

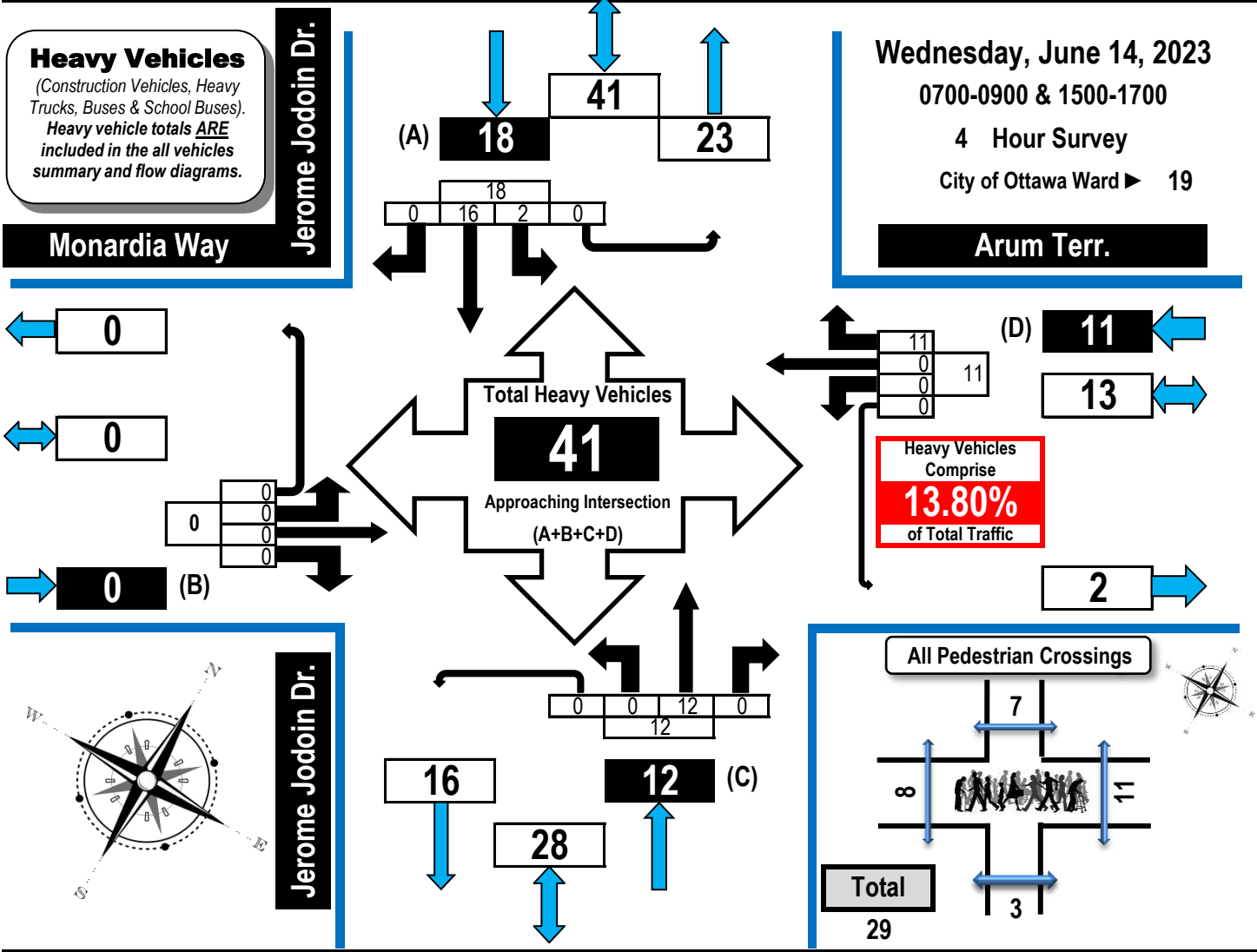
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4-13)
Flow Diagram

Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals ARE included in the all vehicles summary and flow diagrams.

Wednesday, June 14, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Monardia Way					Arum Terr.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	3	0	0	3	7
0800-0900	0	0	0	0	0	0	0	5	0	5	0	2	0	0	2	1	4	0	0	5	12
1500-1600	0	0	0	0	0	0	0	3	0	3	0	5	0	0	5	1	5	0	0	6	14
1600-1700	0	0	0	0	0	0	0	2	0	2	0	2	0	0	2	0	4	0	0	4	8
Totals	0	0	0	0	0	0	0	11	0	11	0	12	0	0	12	2	16	0	0	18	41

Comments:
Transit buses and school buses comprise 95.12% of the heavy vehicle traffic.

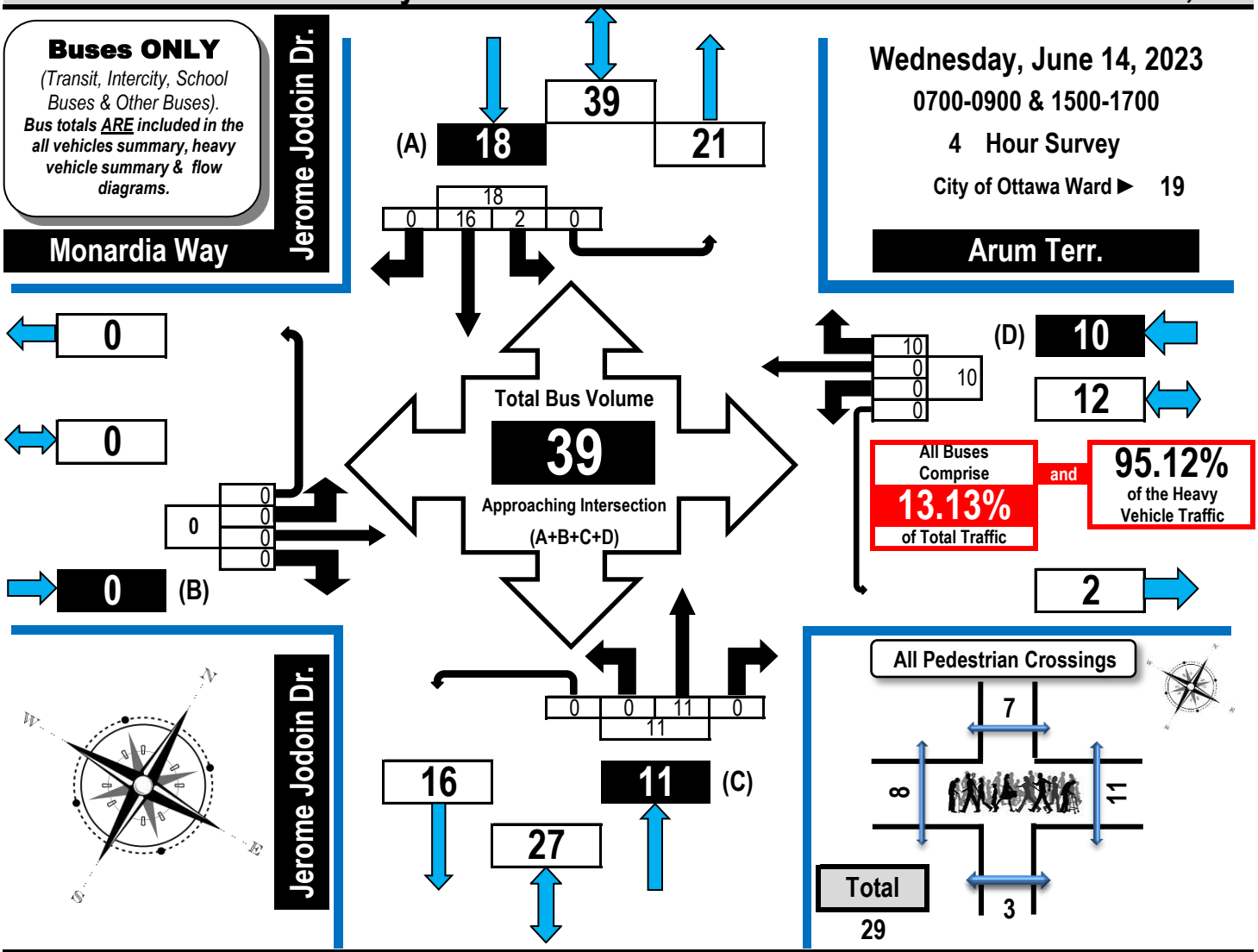
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
All Buses Summary (FHWA Class 4 ONLY)
Flow Diagram

Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.

Wednesday, June 14, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19

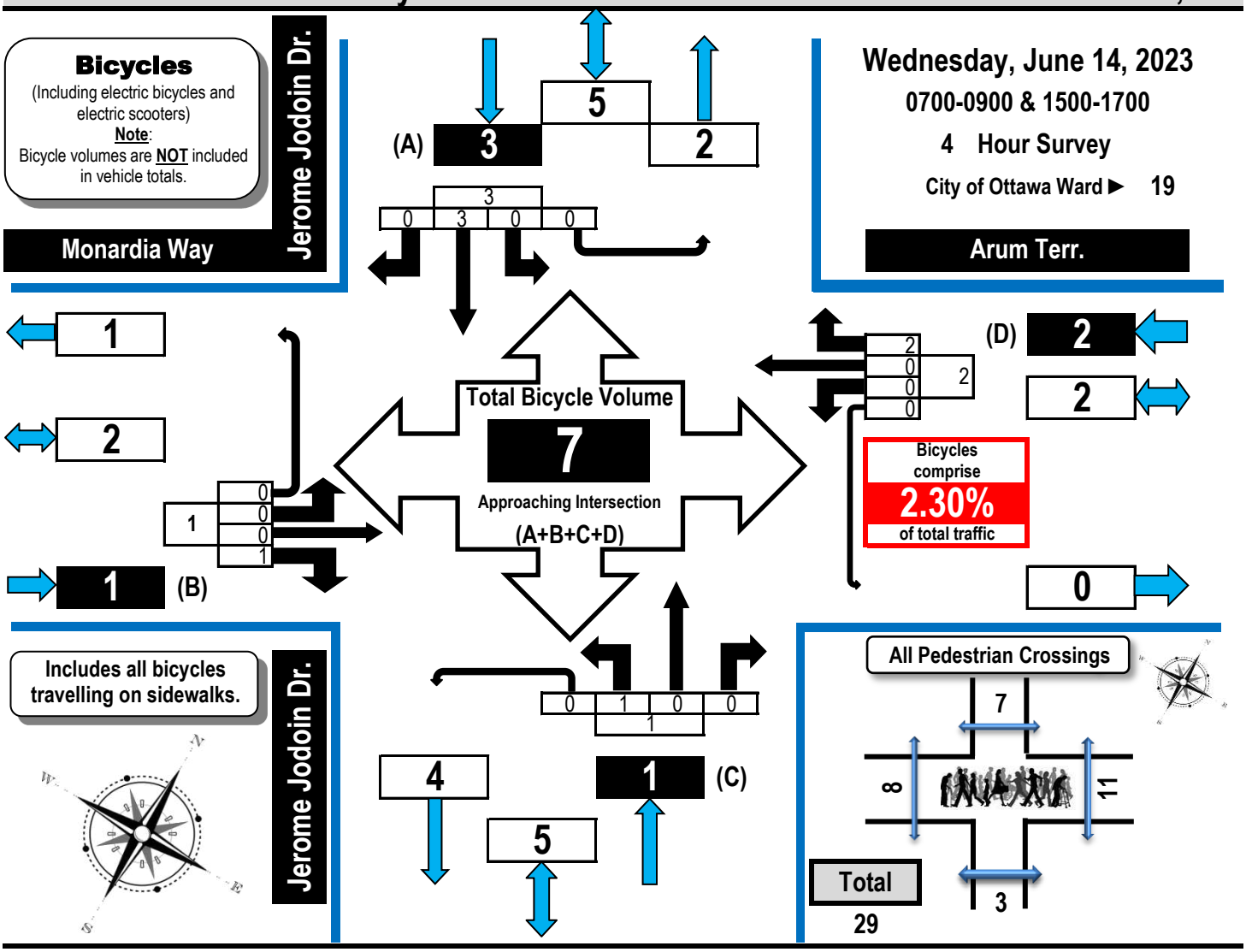


	Monardia Way					Arum Terr.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	3	0	0	3	7
0800-0900	0	0	0	0	0	0	0	5	0	5	0	2	0	0	2	1	4	0	0	5	12
1500-1600	0	0	0	0	0	0	0	3	0	3	0	5	0	0	5	1	5	0	0	6	14
1600-1700	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	4	0	0	4	6
Totals	0	0	0	0	0	0	0	10	0	10	0	11	0	0	11	2	16	0	0	18	39

Comments:
Transit buses and school buses comprise 95.12% of the heavy vehicle traffic.

Turning Movement Count
Bicycle Summary
Flow Diagram

Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON



	Monardia Way					Arum Terr.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
1500-1600	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	4
1600-1700	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
Totals	0	0	1	0	1	0	0	2	0	2	1	0	0	0	1	0	3	0	0	3	7

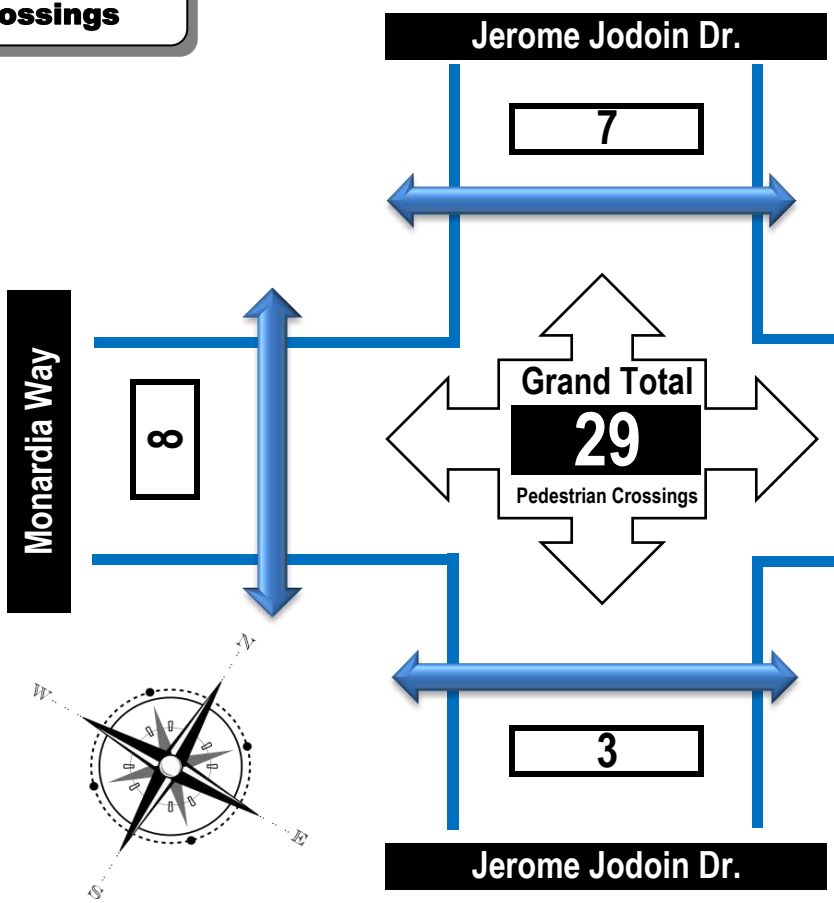
Comments:
Transit buses and school buses comprise 95.12% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Arum Terrace/Monardia Way & Jerome Jodoin Drive — Orléans, ON

Pedestrian Crossings

Wednesday, June 14, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



Note
*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Monardia Way	East Side Crossing Arum Terr.	Street Total	South Side Crossing Jerome Jodoin Dr.	North Side Crossing Jerome Jodoin Dr.	Street Total	Grand Total
0700-0800	0	4	4	0	3	3	7
0800-0900	3	1	4	0	1	1	5
1500-1600	3	3	6	0	0	0	6
1600-1700	2	3	5	3	3	6	11
Totals	8	11	19	3	7	10	29

Comments:
Transit buses and school buses comprise 95.12% of the heavy vehicle traffic.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — Orléans, ON

Survey Date: Wednesday, June 14, 2023 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Mostly Cloudy 13° C **Survey Duration:** 6 Hrs. **Survey Hours:** 0700-1000 & 1500-1800

Weather PM: Overcast 17° C **Surveyor(s):** T. Carmody

	Willow Aster Cir.					Bartonia Cir.						Jerome Jodoin Dr.					Jerome Jodoin Dr.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	11	10	5	2	28	0	27	18	0	45	73	20	24	0	0	44	2	14	42	0	58	102	175
0800-0900	25	5	9	0	39	0	18	21	0	39	78	19	33	0	0	52	11	33	31	0	75	127	205
0900-1000	6	3	7	0	16	0	10	10	0	20	36	10	20	0	0	30	10	20	12	0	42	72	108
1500-1600	25	15	13	0	53	0	8	16	1	25	78	14	26	0	0	40	19	33	23	0	75	115	193
1600-1700	33	23	14	0	70	0	11	17	0	28	98	13	19	0	0	32	17	28	20	0	65	97	195
1700-1800	22	18	16	0	56	0	11	20	0	31	87	7	29	0	0	36	19	30	25	0	74	110	197
Totals	122	74	64	2	262	0	85	102	1	188	450	83	151	0	0	234	78	158	153	0	389	623	1073

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡					0.83							Highest Hourly Vehicle Volume Between 0700h & 1000h											
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0745-0845	25	8	9	1	43	0	19	22	0	41	84	19	32	0	0	51	9	31	41	0	81	132	216

PM Peak Hour Factor ➡					0.77							Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1515-1615	28	22	16	0	66	0	11	15	1	27	93	16	20	0	0	36	22	37	22	0	81	117	210

Comments:

Transit buses and school buses comprise 79.73% of the heavy vehicle traffic.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

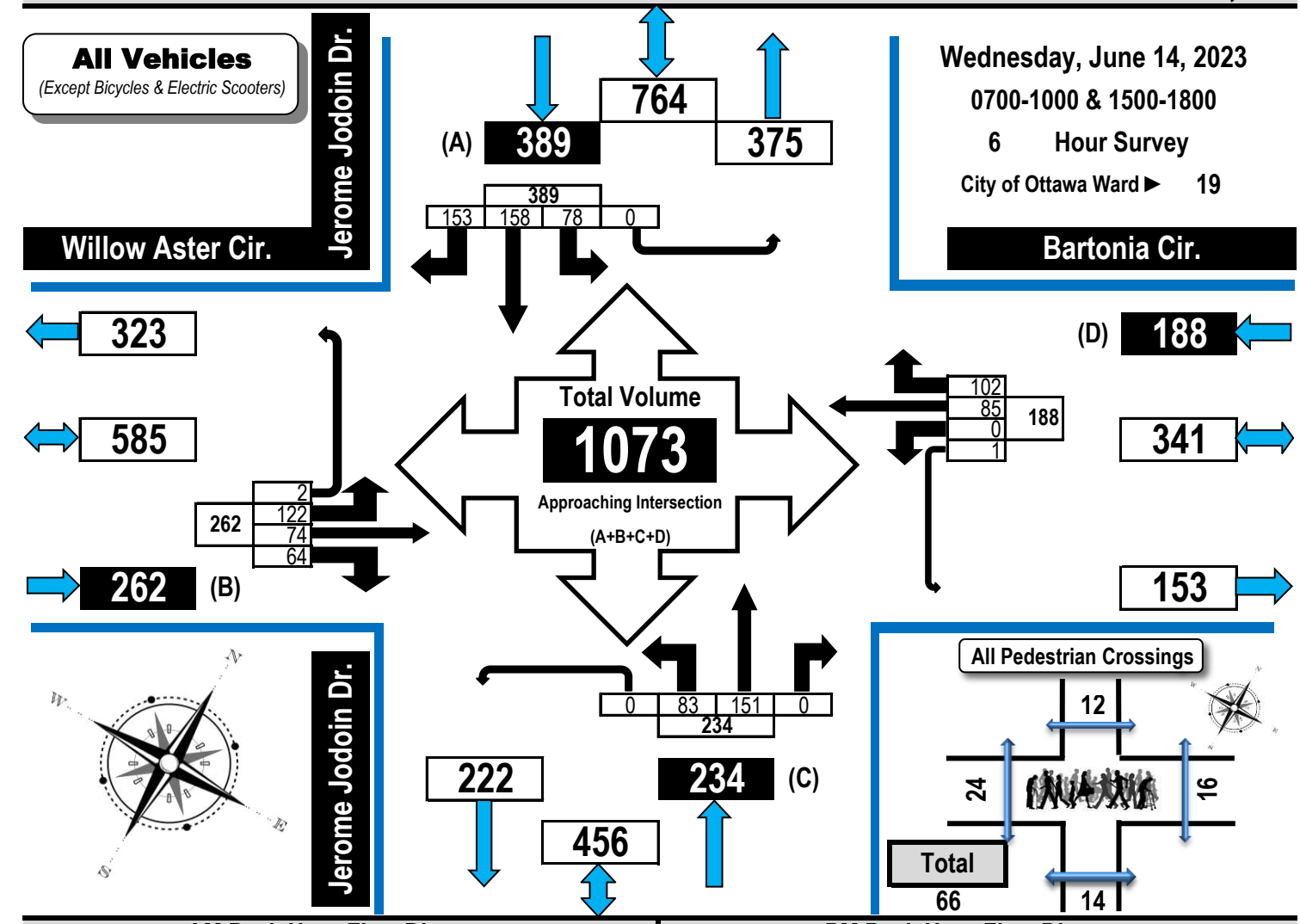
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

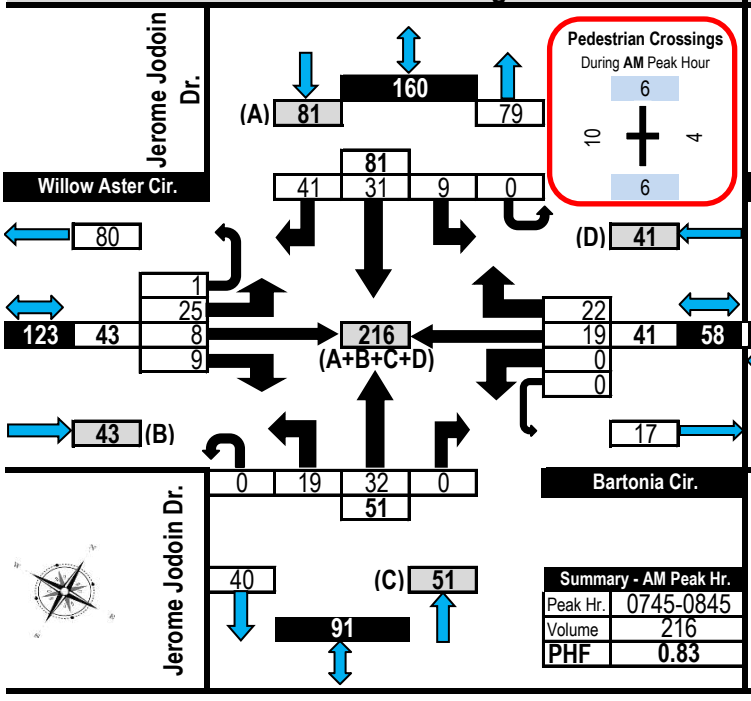
Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — Orléans, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, June 14, 2023
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ▶ 19

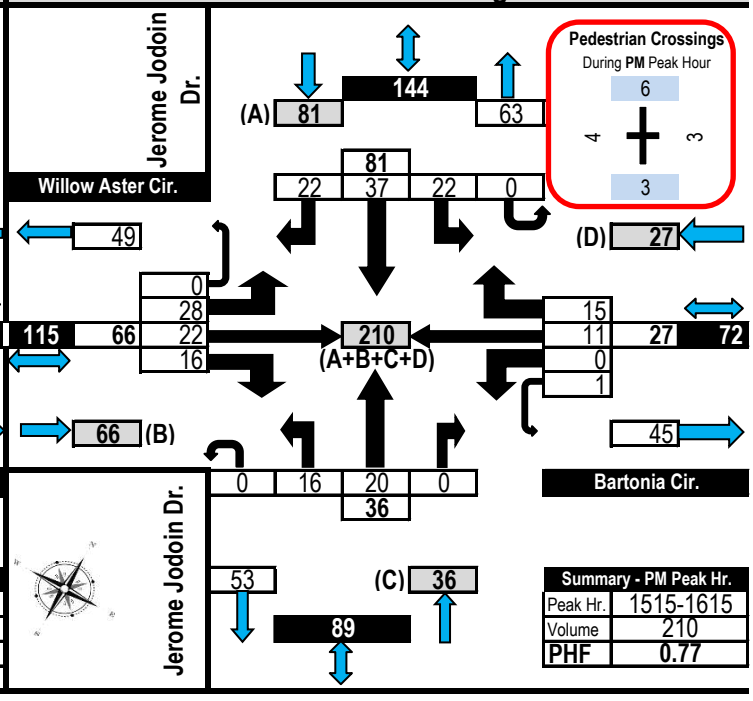


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0745-0845
Volume	216
PHF	0.83

PM Peak Hour Flow Diagram



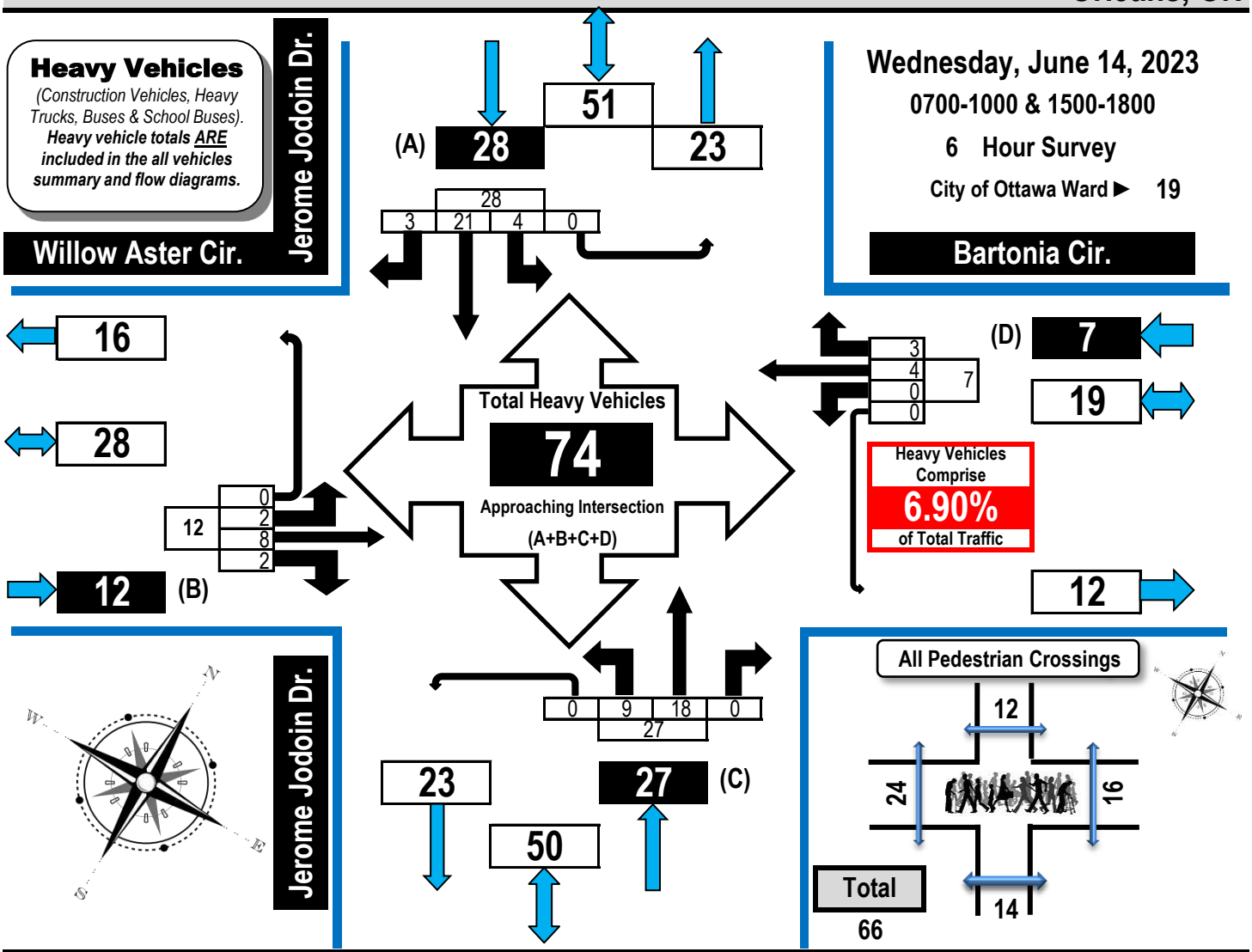
Summary - PM Peak Hr.	
Peak Hr.	1515-1615
Volume	210
PHF	0.77

Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4-13)
Flow Diagram

Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — **Orléans, ON**

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals ARE included in the all vehicles summary and flow diagrams.

Wednesday, June 14, 2023
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 19



	Willow Aster Cir.					Bartonia Cir.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	2	2	0	0	4	0	1	0	0	1	1	3	0	0	4	1	3	0	0	4	13
0800-0900	0	2	1	0	3	0	1	1	0	2	3	5	0	0	8	1	5	1	0	7	20
0900-1000	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	1	2	0	0	3	6
1500-1600	0	2	1	0	3	0	0	1	0	1	2	6	0	0	8	1	5	2	0	8	20
1600-1700	0	1	0	0	1	0	1	0	0	1	3	1	0	0	4	0	4	0	0	4	10
1700-1800	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	5
Totals	2	8	2	0	12	0	4	3	0	7	9	18	0	0	27	4	21	3	0	28	74

Comments:
Transit buses and school buses comprise 79.73% of the heavy vehicle traffic.

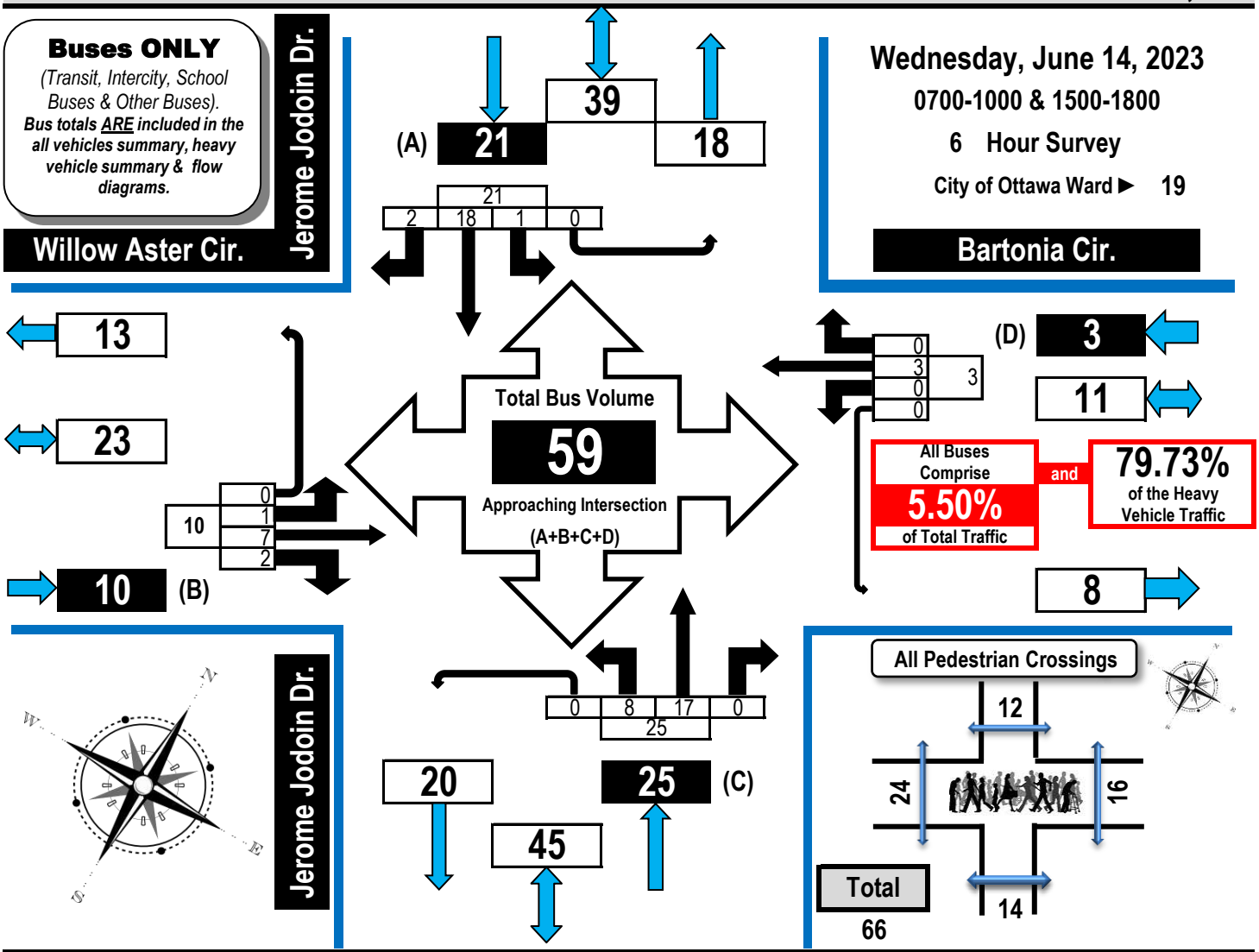
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
All Buses Summary (FHWA Class 4 ONLY)
Flow Diagram

Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — **Orléans, ON**

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.

Wednesday, June 14, 2023
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 19

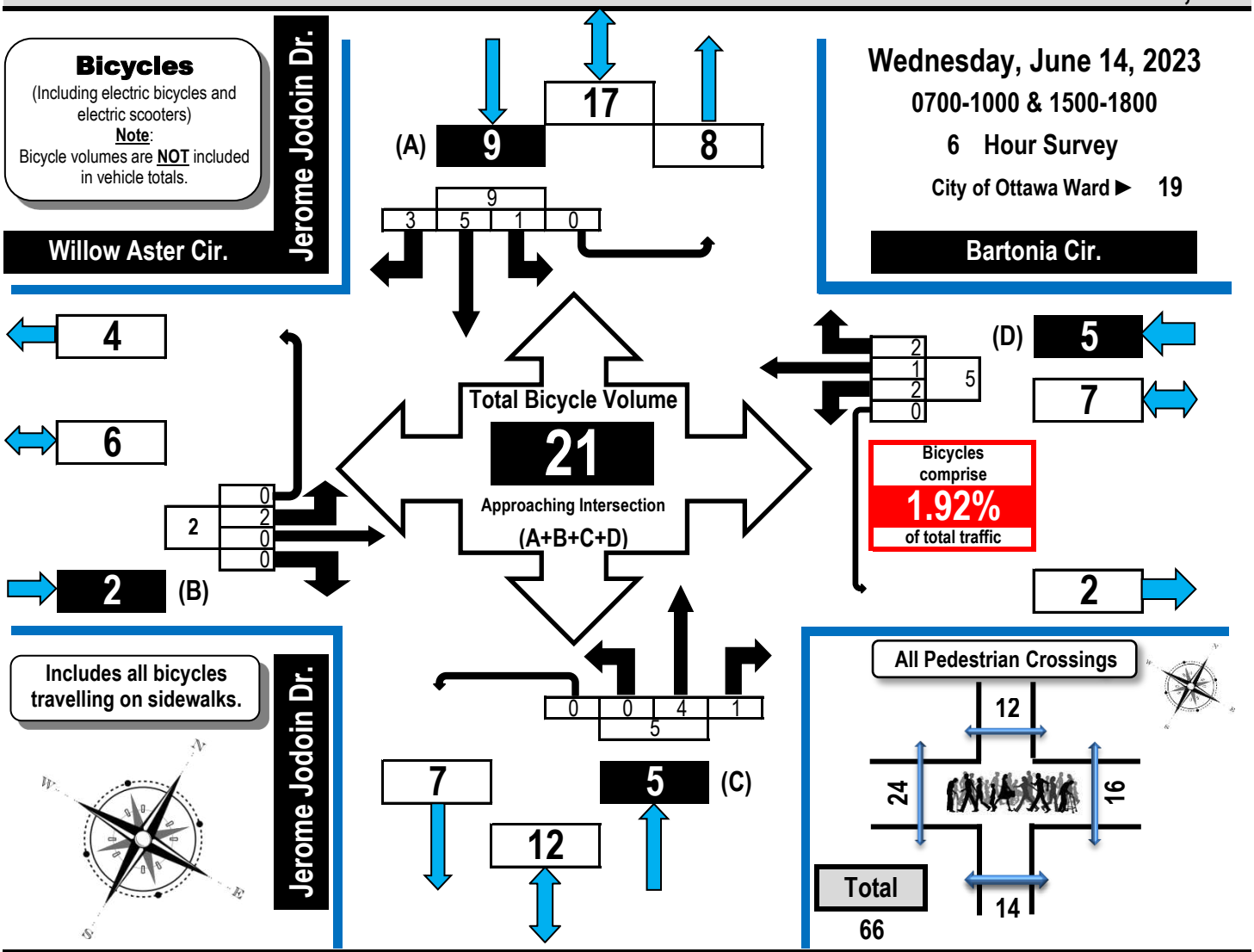


	Willow Aster Cir.					Bartonia Cir.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	1	2	0	0	3	0	1	0	0	1	1	3	0	0	4	1	3	0	0	4	12
0800-0900	0	2	1	0	3	0	1	0	0	1	3	4	0	0	7	0	4	1	0	5	16
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1500-1600	0	2	1	0	3	0	0	0	0	0	2	6	0	0	8	0	5	1	0	6	17
1600-1700	0	1	0	0	1	0	1	0	0	1	2	1	0	0	3	0	4	0	0	4	9
1700-1800	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
Totals	1	7	2	0	10	0	3	0	0	3	8	17	0	0	25	1	18	2	0	21	59

Comments:
Transit buses and school buses comprise 79.73% of the heavy vehicle traffic.

Turning Movement Count
Bicycle Summary
Flow Diagram

Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — **Orléans, ON**



	Willow Aster Cir.					Bartonia Cir.					Jerome Jodoin Dr.					Jerome Jodoin Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	3
0800-0900	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500-1600	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	4
1600-1700	0	0	0	0	0	1	0	1	0	2	0	3	1	0	4	0	3	1	0	4	10
1700-1800	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	2
Totals	**2**	**0**	**0**	**0**	**2**	**2**	**1**	**2**	**0**	**5**	**0**	**4**	**1**	**0**	**5**	**1**	**5**	**3**	**0**	**9**	**21**

Comments:

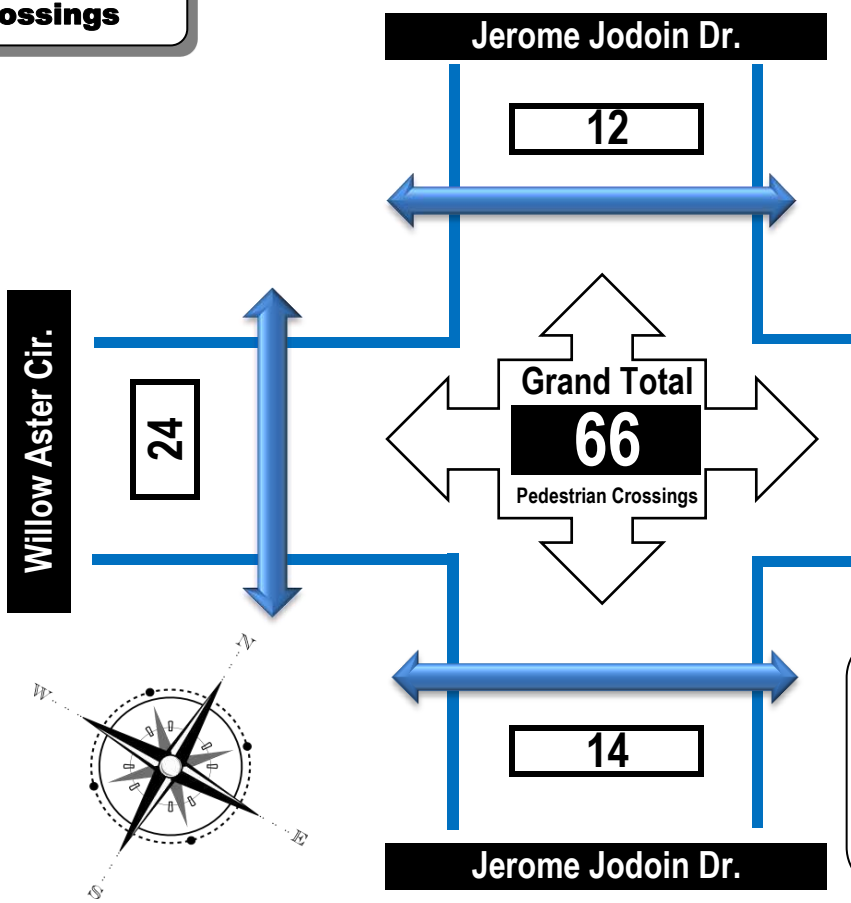
Transit buses and school buses comprise 79.73% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Bartonia Circle/Willow Aster Circle & Jerome Jodoin Drive — **Orléans, ON**

Pedestrian Crossings

Wednesday, June 14, 2023
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 19



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Willow Aster Cir.	East Side Crossing Bartonia Cir.	Street Total	South Side Crossing Jerome Jodoin Dr.	North Side Crossing Jerome Jodoin Dr.	Street Total	Grand Total
0700-0800	5	1	6	4	0	4	10
0800-0900	10	3	13	5	6	11	24
0900-1000	2	3	5	2	0	2	7
1500-1600	4	2	6	2	6	8	14
1600-1700	0	6	6	1	0	1	7
1700-1800	3	1	4	0	0	0	4
Totals	**24**	**16**	**40**	**14**	**12**	**26**	**66**

Comments:
Transit buses and school buses comprise 79.73% of the heavy vehicle traffic.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

Survey Date: Thursday, June 29, 2023 **Start Time:** 0700 **AADT Factor:** 0.9
Weather AM: Hazy 18° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0700-0900 & 1500-1700
Weather PM: Hazy 26° C **Surveyor(s):** T. Carmody

	Copperhead St.					Décoeur Dr.						Mer-Bleue Rd.					Mer-Bleue Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	1	2	0	0	3	52	0	240	0	292	295	3	254	17	0	274	28	117	5	8	158	432	727
0800-0900	3	2	1	0	6	44	1	192	0	237	243	0	262	20	0	282	37	126	7	4	174	456	699
1500-1600	7	5	4	0	16	28	2	89	0	119	135	0	357	65	0	422	108	234	1	4	347	769	904
1600-1700	5	6	1	0	12	35	1	126	0	162	174	0	453	93	0	546	184	322	3	4	513	1059	1233
Totals	16	15	6	0	37	159	4	647	0	810	847	3	1326	195	0	1524	357	799	16	20	1192	2716	3563

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡					0.90							Highest Hourly Vehicle Volume Between 0700h & 1000h											
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0715-0815	2	3	1	0	6	54	0	241	0	295	301	2	275	18	0	295	35	120	5	7	167	462	763

PM Peak Hour Factor ➡					0.92							Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1600-1700	5	6	1	0	12	35	1	126	0	162	174	0	453	93	0	546	184	322	3	4	513	1059	1233

Comments:

OC Transpo and Para Transpo buses and school buses comprise 41.30% of the heavy vehicle traffic. Copperhead Street, although paved, is not yet open to the public.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ▶ 19

Mer-Bleue Rd. | Copperhead St. | Décoeur Dr. | Mer-Bleue Rd.

(A) 1192 | 3201 | 2009
1192: 16 | 799 | 357 | 20

23
60
37 (B)
0 | 16 | 15 | 6 → 37

(D) 810
1377
567
647 | 4 | 159 | 0 → 810

Total Volume
3563
Approaching Intersection
(A+B+C+D)

0 | 3 | 1326 | 195 → 1524
964
1524 (C)
2488

All Pedestrian Crossings
2 | 3 | 4
Total: 10 | 1

AM Peak Hour Flow Diagram

(A) 167 | 692 | 525
167: 5 | 120 | 35 | 7

Pedestrian Crossings During AM Peak Hour: 0 | 2 | 0 | 0

7
(D) 295
13 | 6 | 0 | 2 | 3 | 1 → 763 (A+B+C+D)
241 | 0 | 295 | 351
54 | 0
6 (B)
56
0 | 2 | 275 | 18 → 295

175 | (C) 295
470

Summary - AM Peak Hr.

Peak Hr.	0715-0815
Volume	763
PHF	0.90

PM Peak Hour Flow Diagram

(A) 513 | 1101 | 588
513: 3 | 322 | 184 | 4

Pedestrian Crossings During PM Peak Hour: 1 | 1 | 2 | 0

4
(D) 162
16 | 12 | 0 | 5 | 6 | 1 → 1233 (A+B+C+D)
126 | 1 | 162 | 445
35 | 0
12 (B)
283
0 | 0 | 453 | 93 → 546

358 | (C) 546
904

Summary - PM Peak Hr.

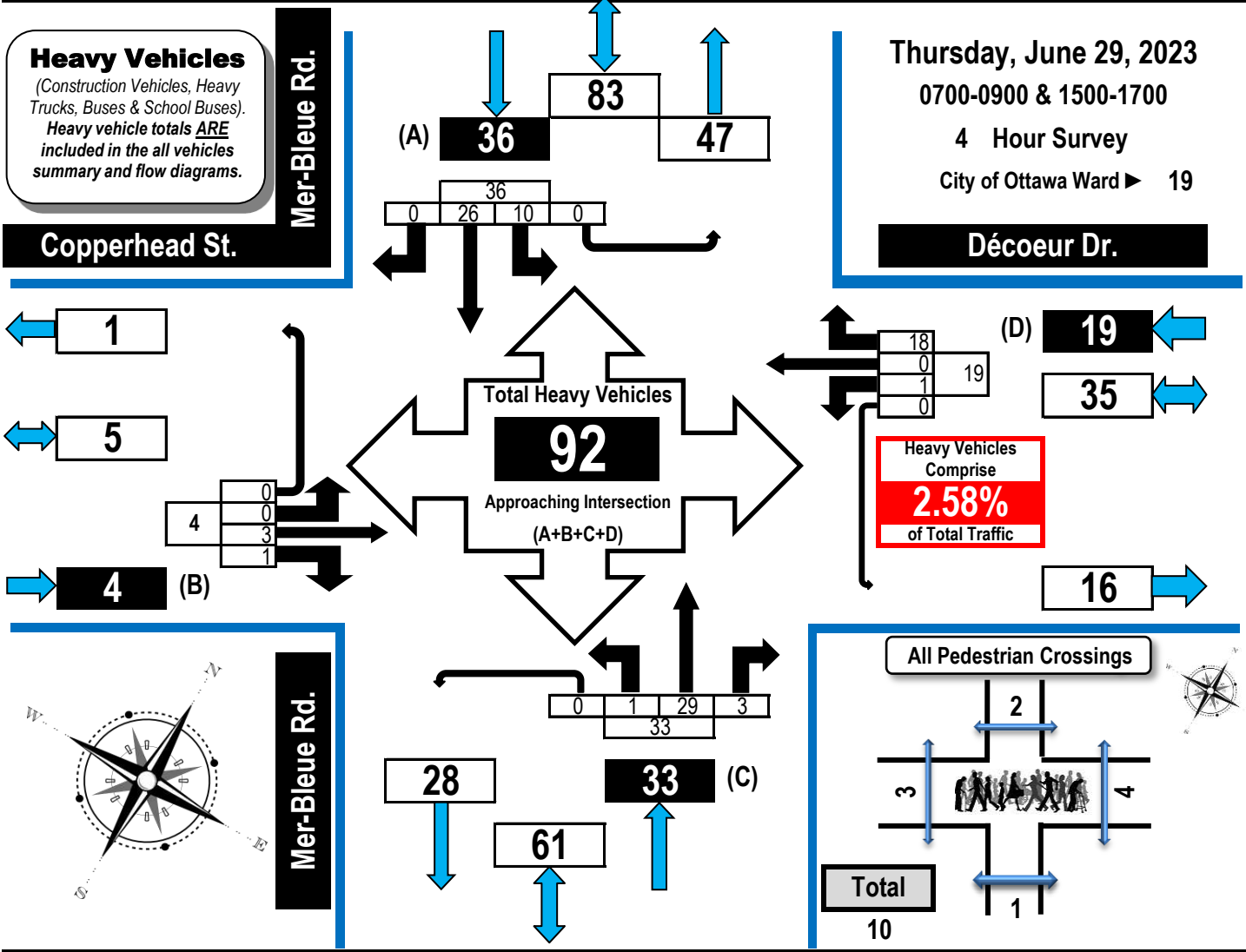
Peak Hr.	1600-1700
Volume	1233
PHF	0.92

Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4-13)
Flow Diagram

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals ARE included in the all vehicles summary and flow diagrams.

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Copperhead St.					Décoeur Dr.					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	1	0	0	1	0	0	5	0	5	1	7	0	0	8	5	4	0	0	9	23
0800-0900	0	0	0	0	0	0	0	4	0	4	0	10	1	0	11	1	9	0	0	10	25
1500-1600	0	1	1	0	2	1	0	5	0	6	0	8	0	0	8	3	3	0	0	6	22
1600-1700	0	1	0	0	1	0	0	4	0	4	0	4	2	0	6	1	10	0	0	11	22
Totals	0	3	1	0	4	1	0	18	0	19	1	29	3	0	33	10	26	0	0	36	92

Comments:
OC Transpo and Para Transpo buses and school buses comprise 41.30% of the heavy vehicle traffic. Copperhead Street, although paved, is not yet open to the public.

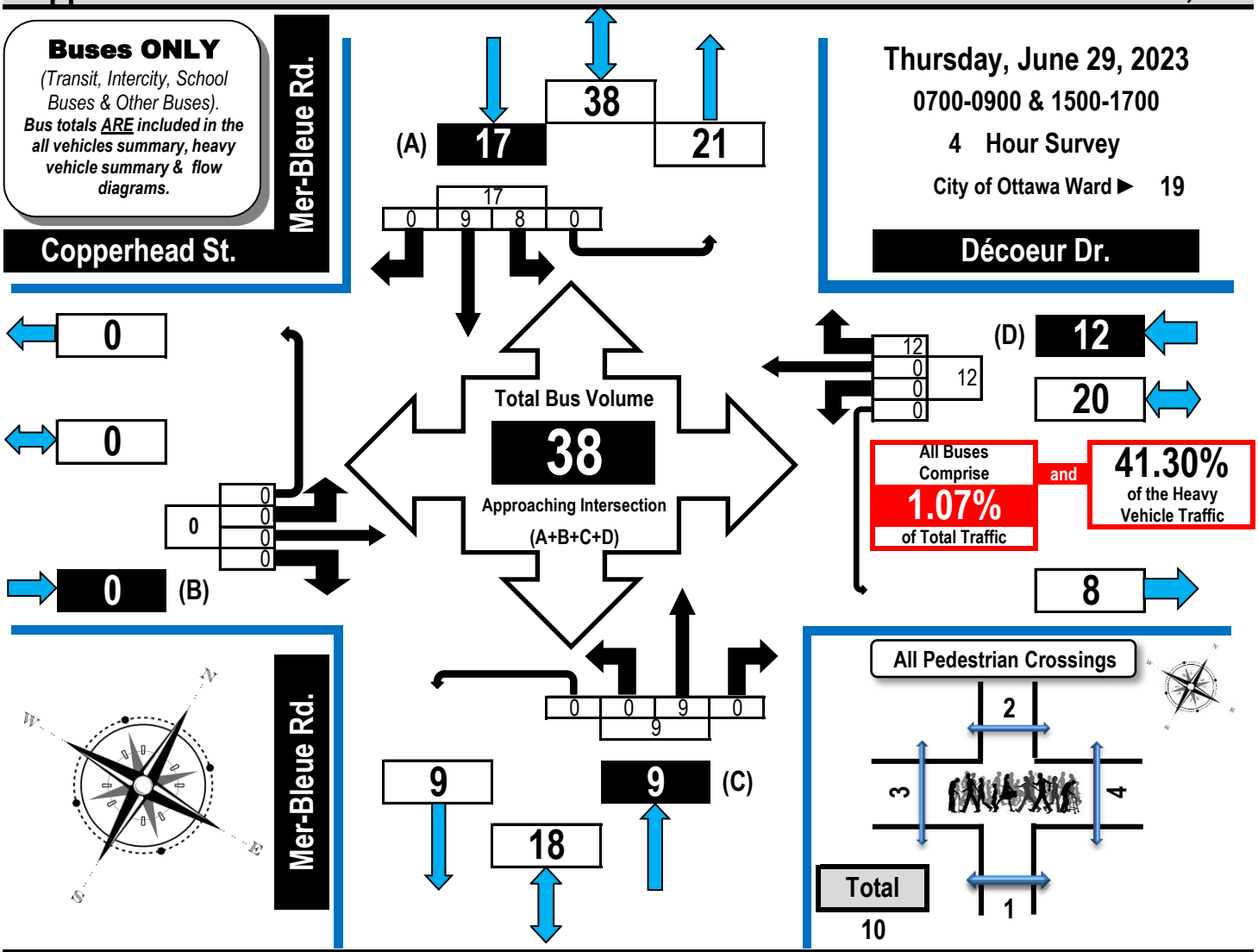
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
All Buses Summary (FHWA Class 4 ONLY)
Flow Diagram

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Copperhead St.					Décoeur Dr.					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	3	0	3	0	2	0	0	2	3	1	0	0	4	9
0800-0900	0	0	0	0	0	0	0	2	0	2	0	3	0	0	3	1	2	0	0	3	8
1500-1600	0	0	0	0	0	0	0	5	0	5	0	3	0	0	3	3	2	0	0	5	13
1600-1700	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	1	4	0	0	5	8
Totals	0	0	0	0	0	0	0	12	0	12	0	9	0	0	9	8	9	0	0	17	38

Comments:
OC Transpo and Para Transpo buses and school buses comprise 41.30% of the heavy vehicle traffic. Copperhead Street, although paved, is not yet open to the public.

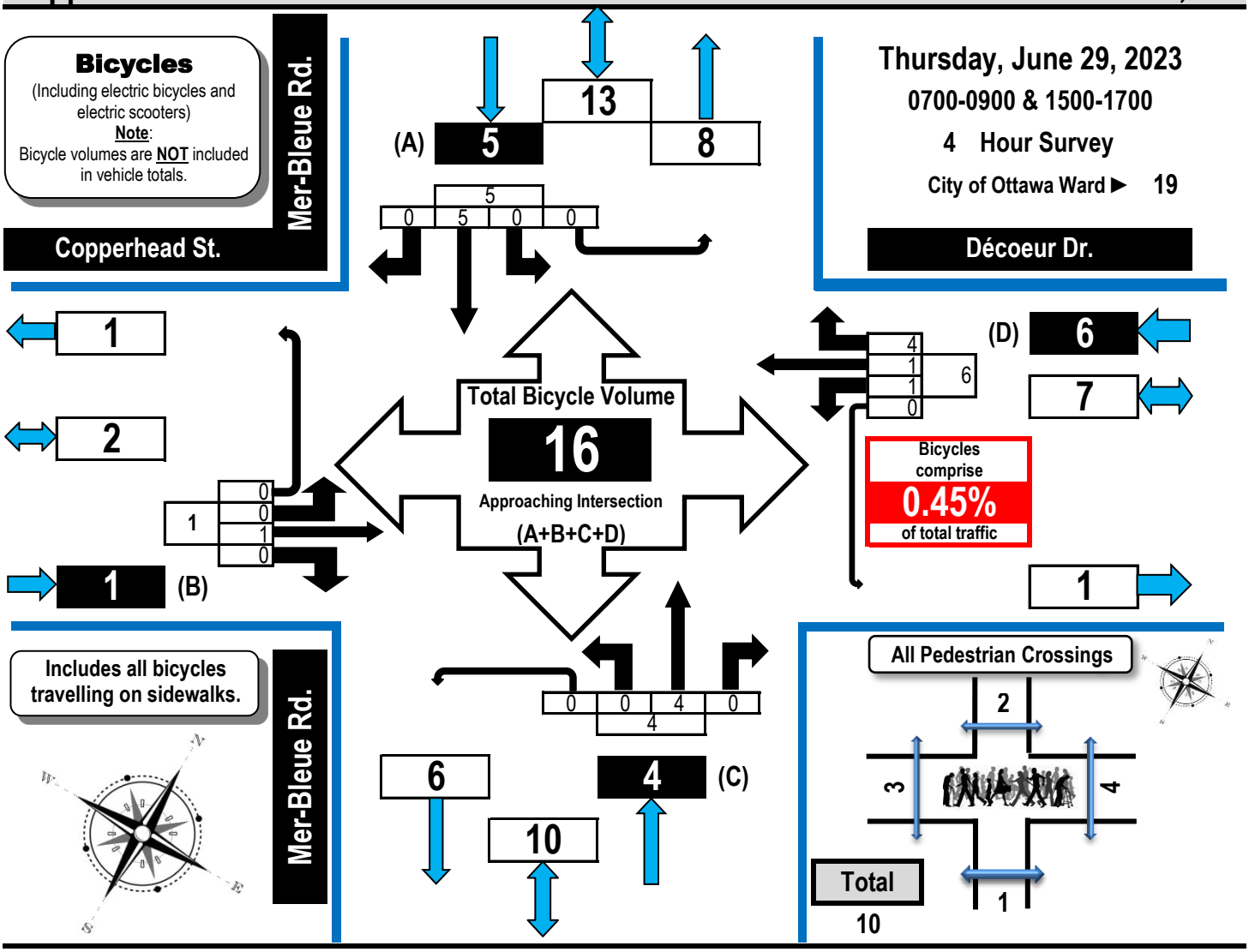
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Bicycle Summary
Flow Diagram

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are **NOT** included in vehicle totals.

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Copperhead St.					Décoeur Dr.					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
1500-1600	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	0	0	3	5
1600-1700	0	1	0	0	1	1	1	4	0	6	0	1	0	0	1	0	0	0	0	0	8
Totals	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**4**	**0**	**6**	**0**	**4**	**0**	**0**	**4**	**0**	**5**	**0**	**0**	**5**	**16**

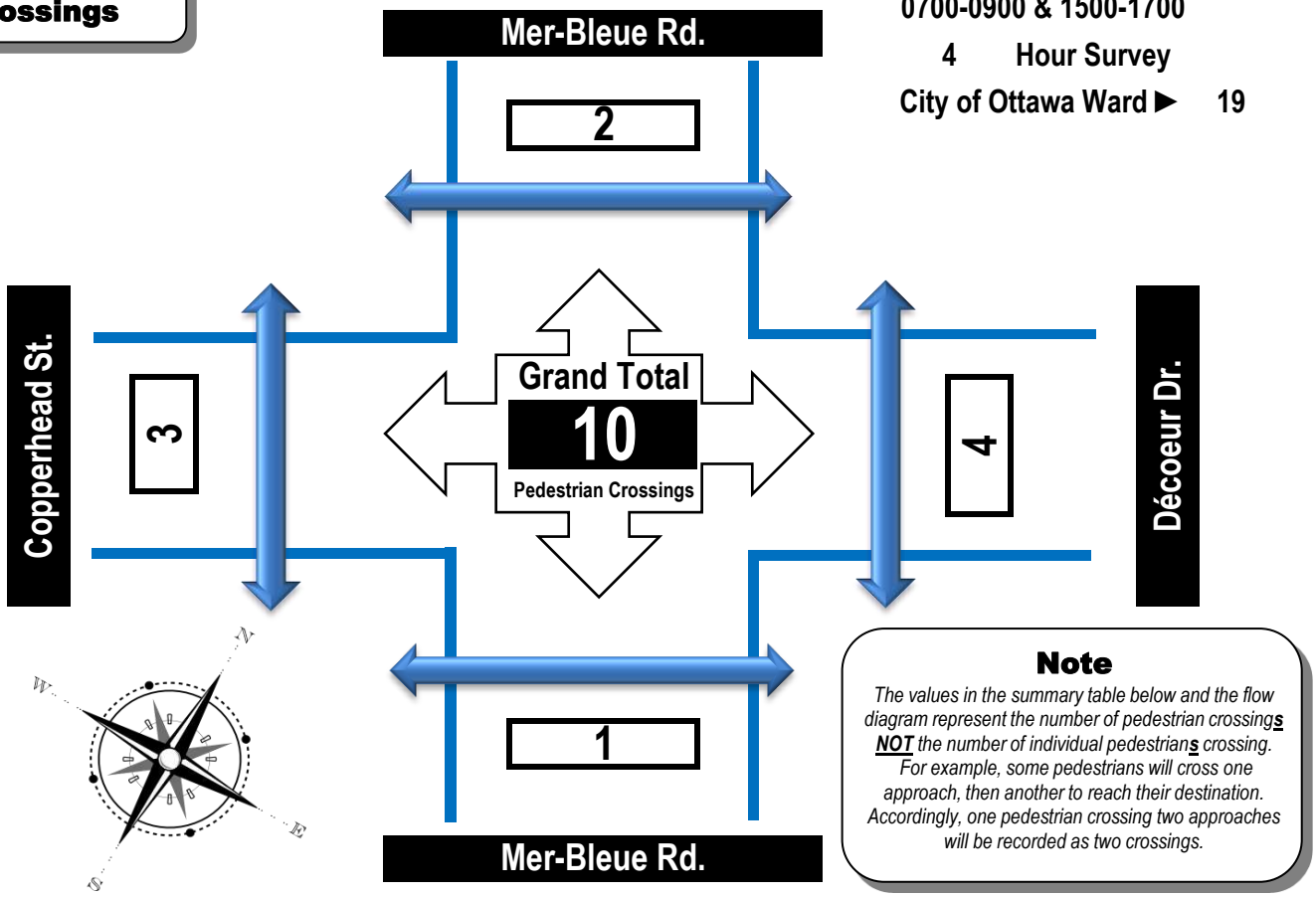
Comments:
OC Transpo and Para Transpo buses and school buses comprise 41.30% of the heavy vehicle traffic. Copperhead Street, although paved, is not yet open to the public.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Copperhead Street/Décoeur Drive & Mer-Bleue Road — Orléans, ON

Pedestrian Crossings

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Copperhead St.	East Side Crossing Décoeur Dr.	Street Total	South Side Crossing Mer-Bleue Rd.	North Side Crossing Mer-Bleue Rd.	Street Total	Grand Total
0700-0800	2	0	2	0	0	0	2
0800-0900	0	1	1	0	0	0	1
1500-1600	0	1	1	1	1	2	3
1600-1700	1	2	3	0	1	1	4
Totals	3	4	7	1	2	3	10

Comments:
OC Transpo and Para Transpo buses and school buses comprise 41.30% of the heavy vehicle traffic. Copperhead Street, although paved, is not yet open to the public.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON

Survey Date: Tuesday, June 20, 2023 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Clear/Sunny 17° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0700-0900 & 1500-1700

Weather PM: Mostly Cloudy 27° C **Surveyor(s):** J. Mousseau

	Decoeur Dr. Eastbound					Decoeur Dr. Westbound						Jerome Jodoin Dr. Northbound					Jerome Jodoin Dr. Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	12	48	9	0	**69**	29	298	7	0	**334**	**403**	23	28	23	0	**74**	5	17	38	0	**60**	**134**	**537**
0800-0900	9	84	10	1	**104**	26	234	13	0	**273**	**377**	41	32	38	0	**111**	13	18	41	2	**74**	**185**	**562**
1500-1600	8	147	21	0	**176**	21	104	16	0	**141**	**317**	17	32	29	0	**78**	13	36	24	0	**73**	**151**	**468**
1600-1700	19	206	20	0	**245**	30	109	14	0	**153**	**398**	14	25	37	0	**76**	15	29	18	0	**62**	**138**	**536**
Totals	**48**	**485**	**60**	**1**	**594**	**106**	**745**	**50**	**0**	**901**	**1495**	**95**	**117**	**127**	**0**	**339**	**46**	**100**	**121**	**2**	**269**	**608**	**2103**

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.90												Highest Hourly Vehicle Volume Between 0700h & 1000h										
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0745-0845	12	89	10	1	**112**	28	271	13	0	**312**	**424**	41	35	36	0	**112**	12	19	56	2	**89**	**201**	**625**

PM Peak Hour Factor ➡ 0.91												Highest Hourly Vehicle Volume Between 1500h & 1800h										
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1545-1645	18	202	18	0	**238**	31	111	15	0	**157**	**395**	17	26	41	0	**84**	18	30	21	0	**69**	**153**	**548**

Comments:

Transit buses and school buses comprise 70.89% of the heavy vehicle traffic.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

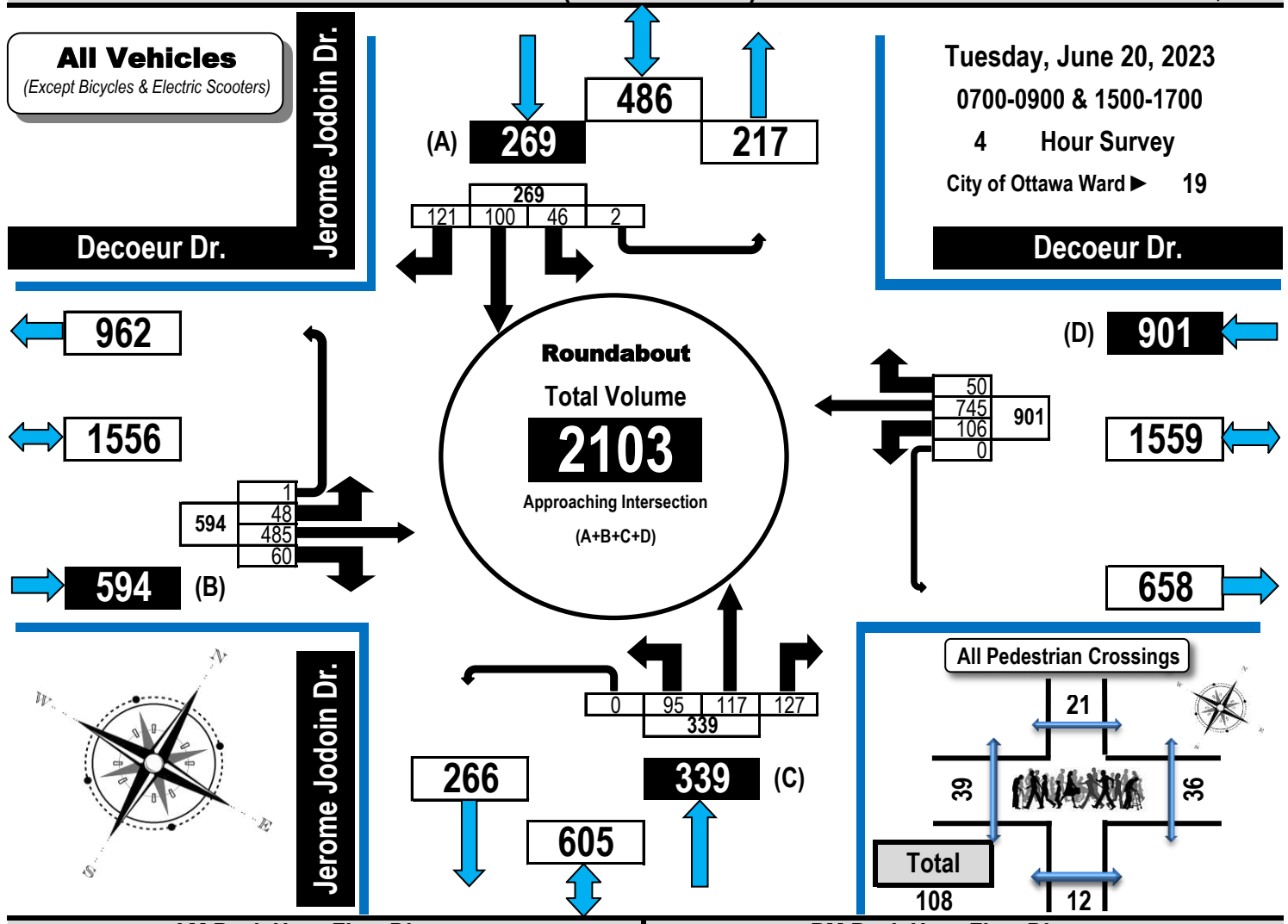
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

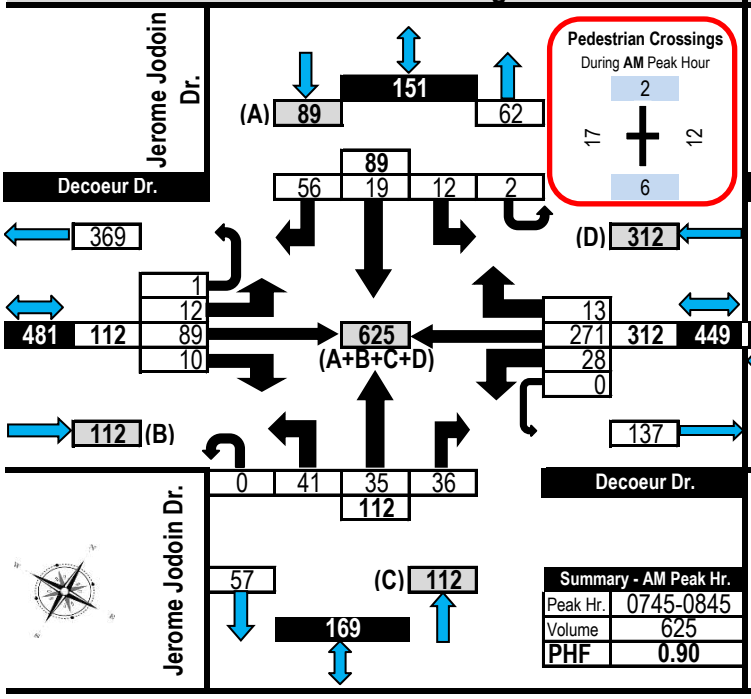
Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, June 20, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ▶ 19

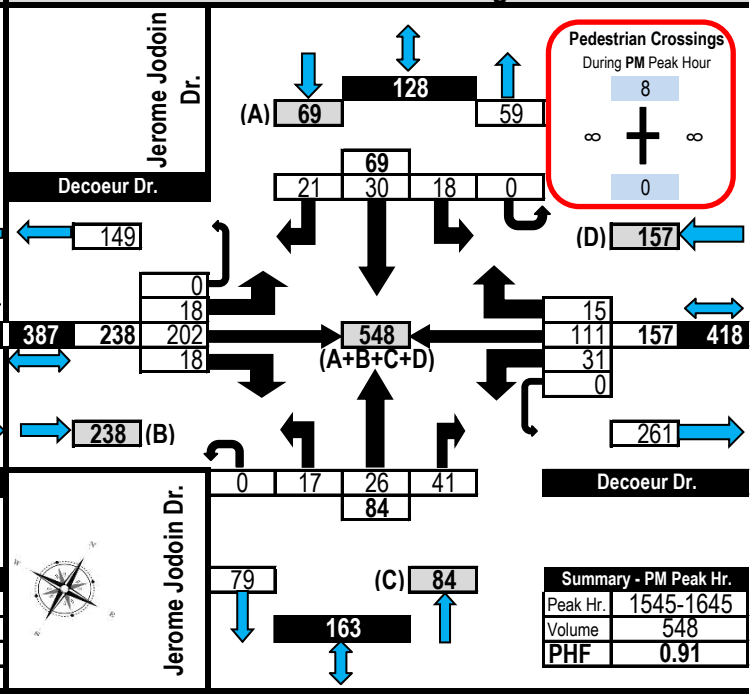


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0745-0845
Volume	625
PHF	0.90

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1545-1645
Volume	548
PHF	0.91

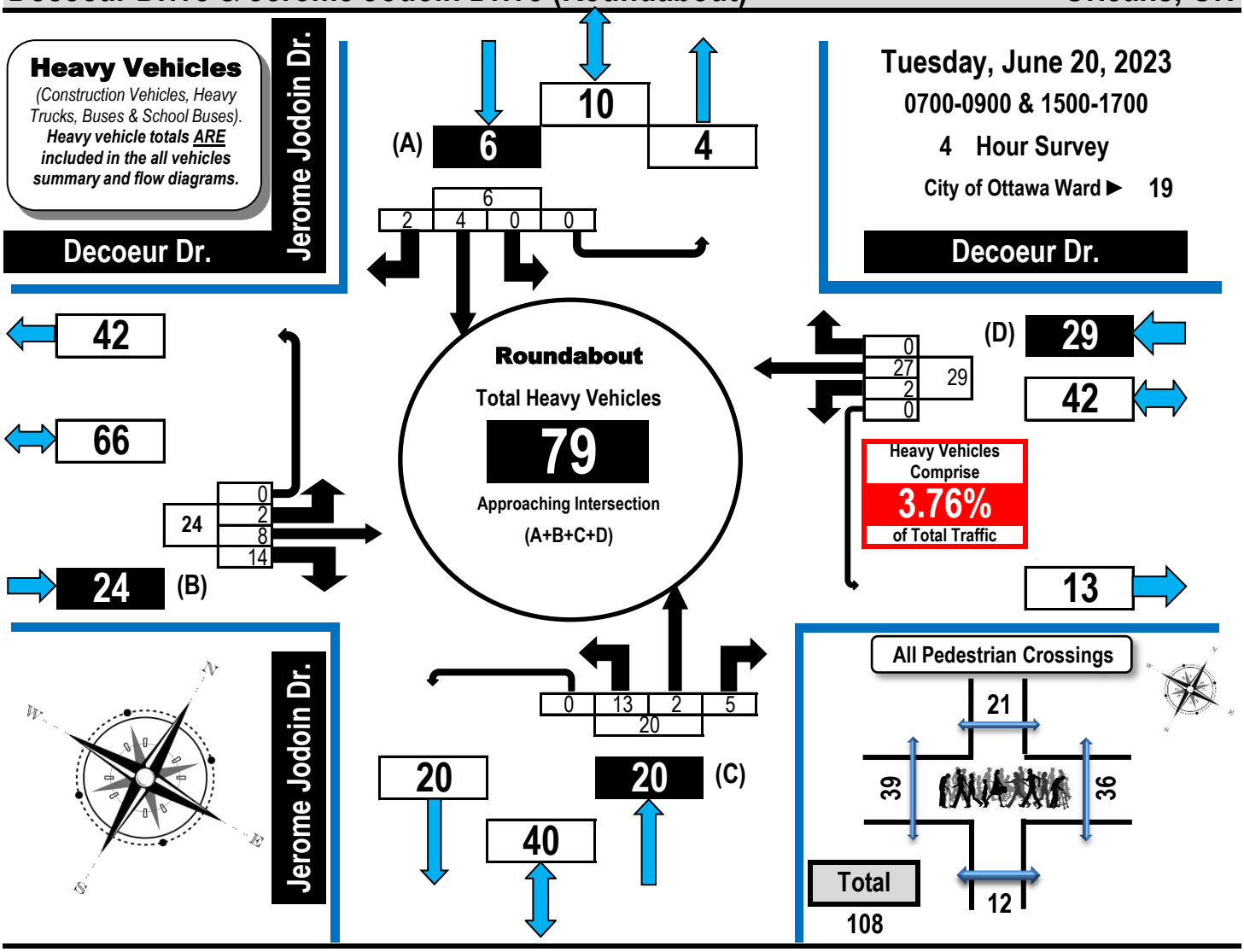
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4-13)
Flow Diagram

Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals ARE included in the all vehicles summary and flow diagrams.

Tuesday, June 20, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Decoeur Dr. Eastbound					Decoeur Dr. Westbound					Jerome Jodoin Dr. Northbound					Jerome Jodoin Dr. Southbound				
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	1	4	3	0	8	0	12	0	0	12	3	0	1	0	4	0	1	0	0	1	25
0800-0900	1	2	4	0	7	1	4	0	0	5	4	1	1	0	6	0	2	1	0	3	21
1500-1600	0	1	5	0	6	1	7	0	0	8	5	1	2	0	8	0	1	1	0	2	24
1600-1700	0	1	2	0	3	0	4	0	0	4	1	0	1	0	2	0	0	0	0	0	9
Totals	2	8	14	0	24	2	27	0	0	29	13	2	5	0	20	0	4	2	0	6	79

Comments:
Transit buses and school buses comprise 70.89% of the heavy vehicle traffic.

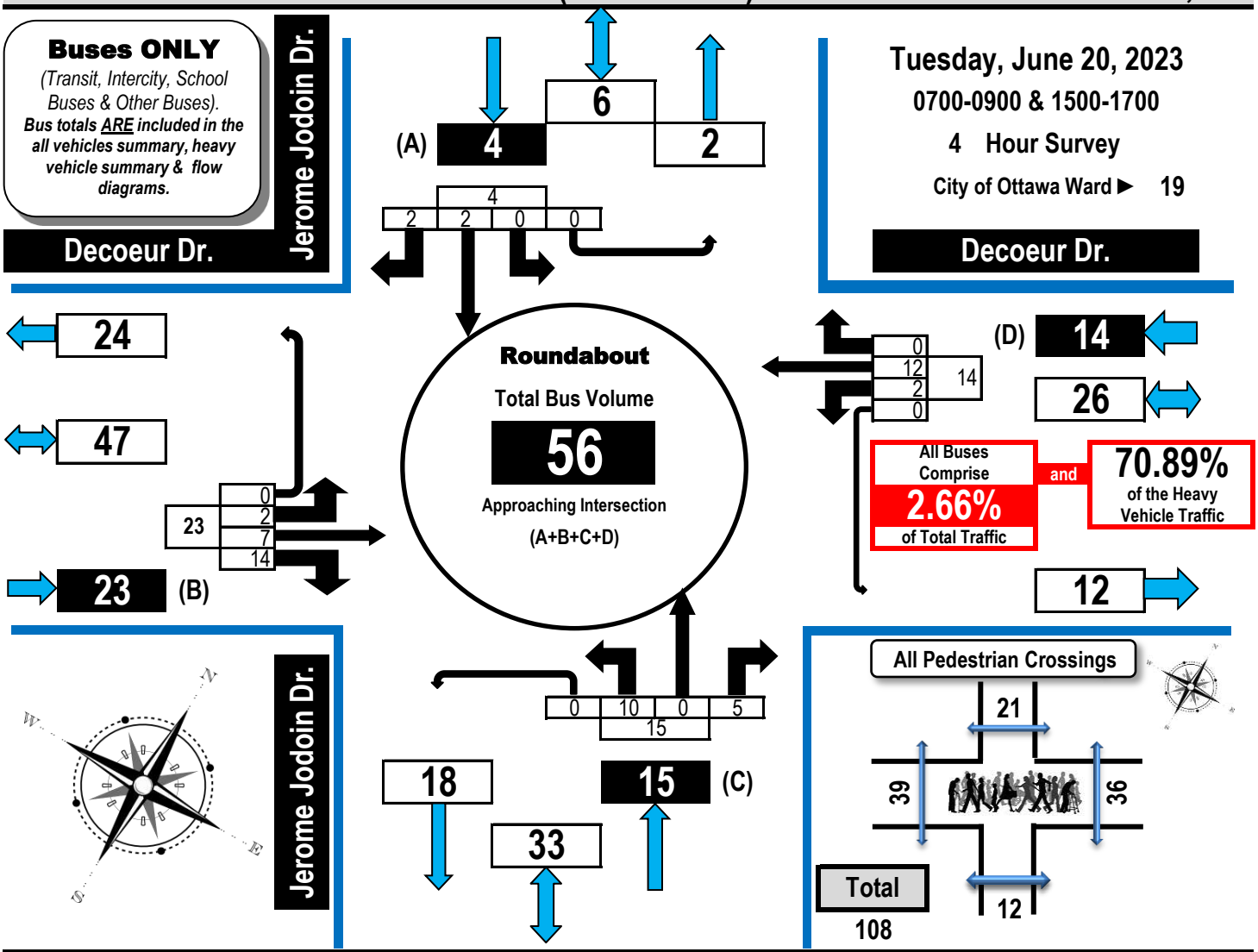
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
All Buses Summary (FHWA Class 4 ONLY)
Flow Diagram

Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.

Tuesday, June 20, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19

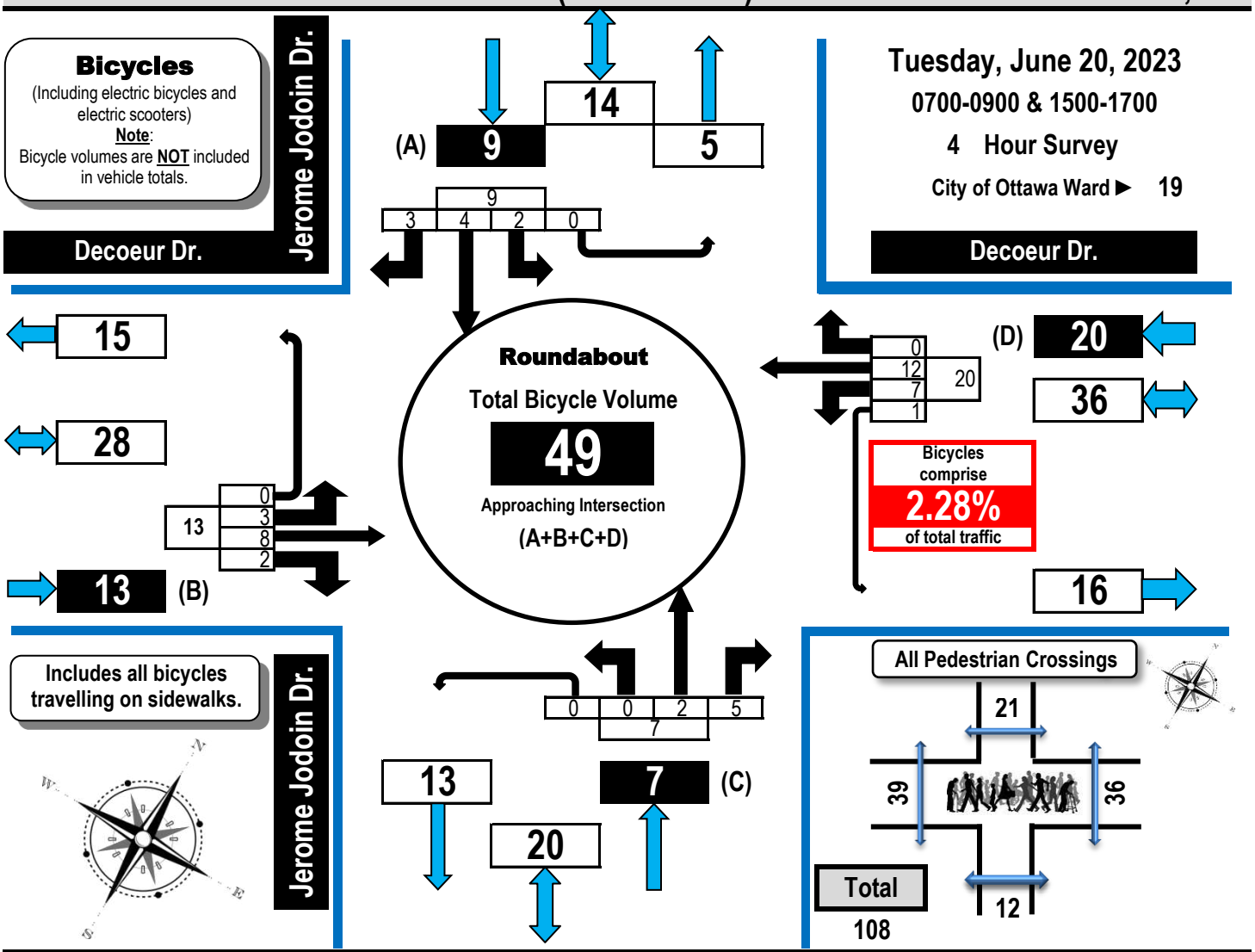


	Decoeur Dr.					Decoeur Dr.					Jerome Jodoin Dr.					Jerome Jodoin Dr.				
	Eastbound					Westbound					Northbound					Southbound				
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	1	3	3	0	7	0	9	0	0	9	2	0	1	0	3	0	1	0	0	1	20
0800-0900	1	2	2	0	5	1	1	0	0	2	3	0	1	0	4	0	1	1	0	2	13
1500-1600	0	1	6	0	7	1	2	0	0	3	4	0	2	0	6	0	0	1	0	1	17
1600-1700	0	1	3	0	4	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	6
Totals	2	7	14	0	23	2	12	0	0	14	10	0	5	0	15	0	2	2	0	4	56

Comments:
Transit buses and school buses comprise 70.89% of the heavy vehicle traffic.

Turning Movement Count
Bicycle Summary
Flow Diagram

Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON



	Decoeur Dr. Eastbound					Decoeur Dr. Westbound					Jerome Jodoin Dr. Northbound					Jerome Jodoin Dr. Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	1	0	1	0	2	9
0800-0900	0	3	0	0	3	0	0	0	1	1	0	0	0	0	0	1	0	1	0	2	6
1500-1600	0	1	2	0	3	5	1	0	0	6	0	0	0	0	0	0	0	1	0	1	10
1600-1700	3	4	0	0	7	1	5	0	0	6	0	2	5	0	7	0	4	0	0	4	24
Totals	3	8	2	0	13	7	12	0	1	20	0	2	5	0	7	2	4	3	0	9	49

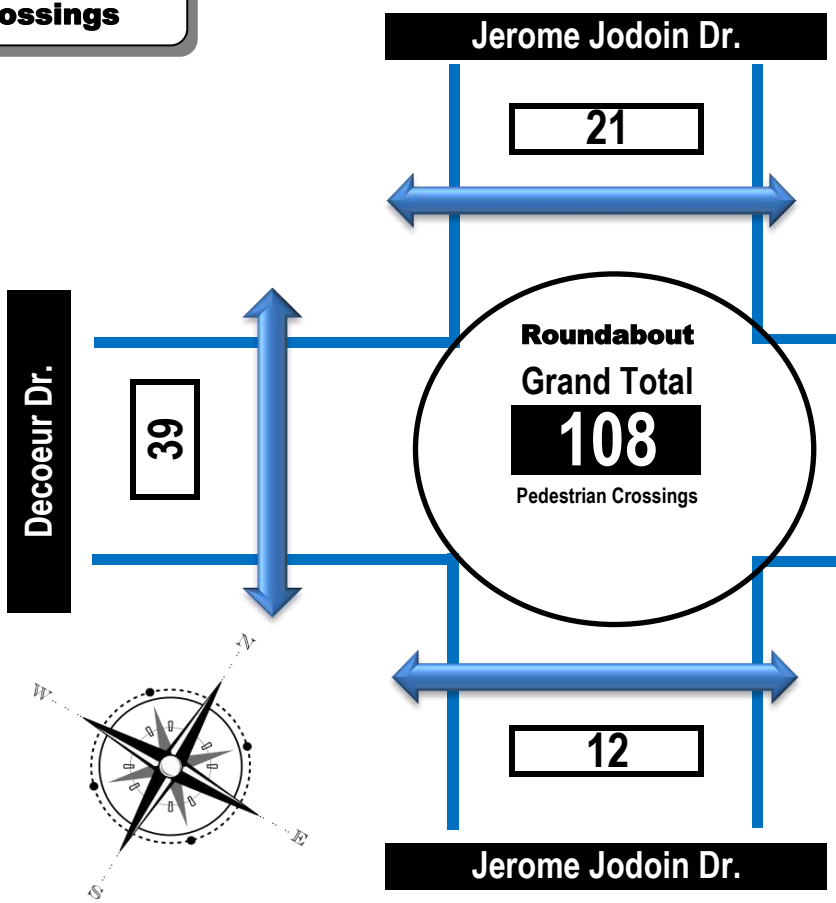
Comments:
Transit buses and school buses comprise 70.89% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Decoeur Drive & Jerome Jodoin Drive (Roundabout) — Orléans, ON

Pedestrian Crossings

Tuesday, June 20, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



Note

*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Decoeur Dr.	East Side Crossing Decoeur Dr.	Street Total	South Side Crossing Jerome Jodoin Dr.	North Side Crossing Jerome Jodoin Dr.	Street Total	Grand Total
0700-0800	12	5	17	6	4	10	27
0800-0900	13	11	24	4	3	7	31
1500-1600	4	7	11	1	7	8	19
1600-1700	10	13	23	1	7	8	31
Totals	**39**	**36**	**75**	**12**	**21**	**33**	**108**

Comments:
Transit buses and school buses comprise 70.89% of the heavy vehicle traffic.

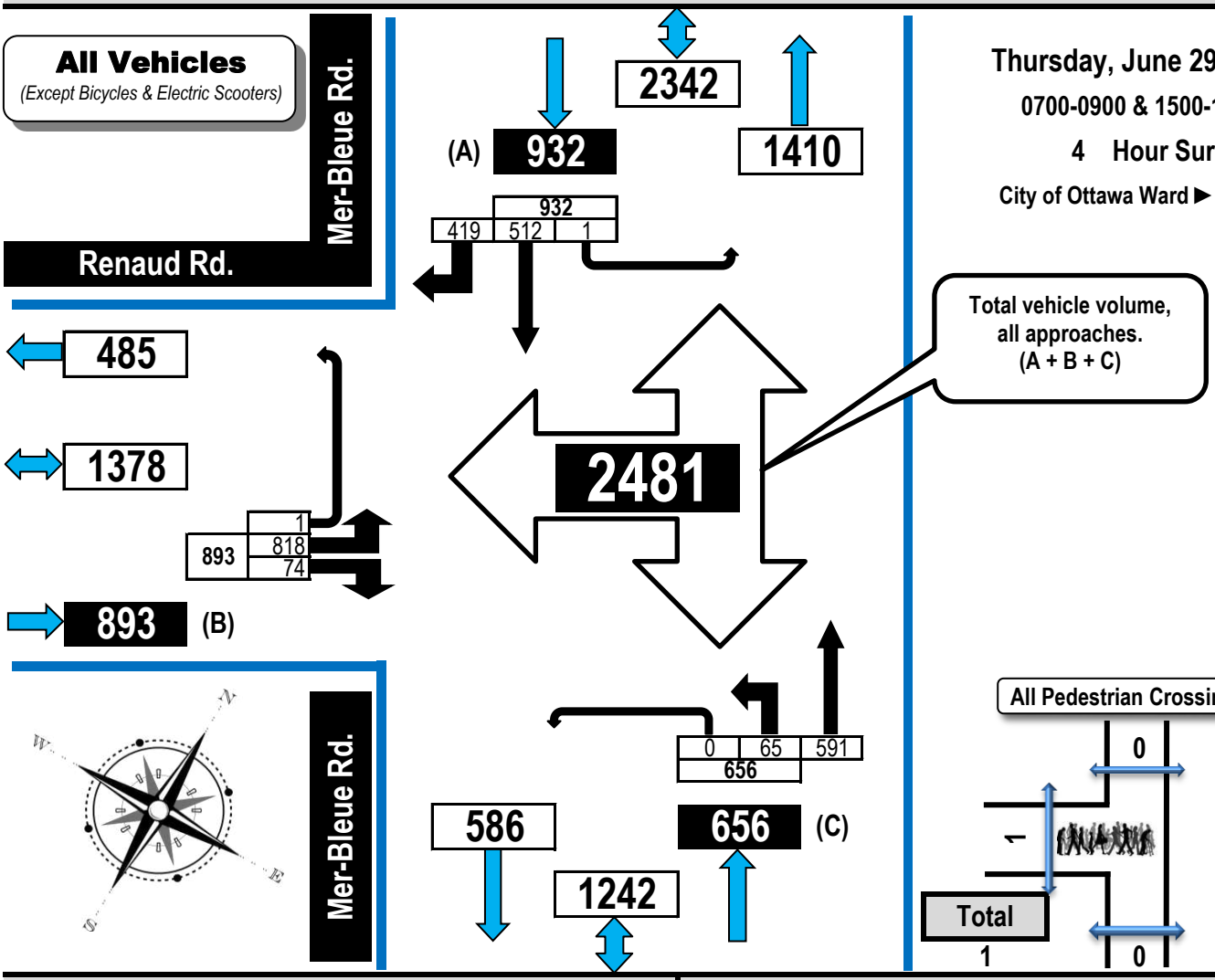
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

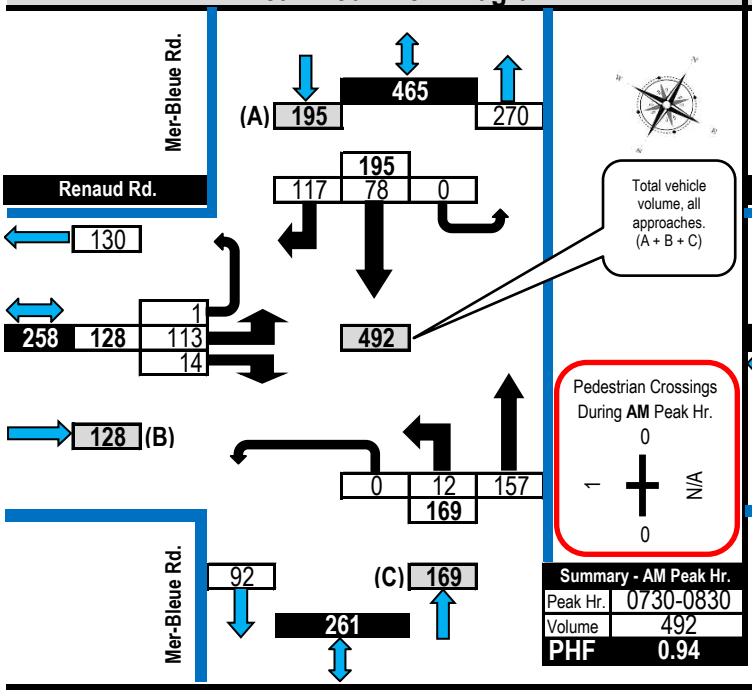
Mer-Bleue Road & Renaud Road — Orléans, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ▶ 19

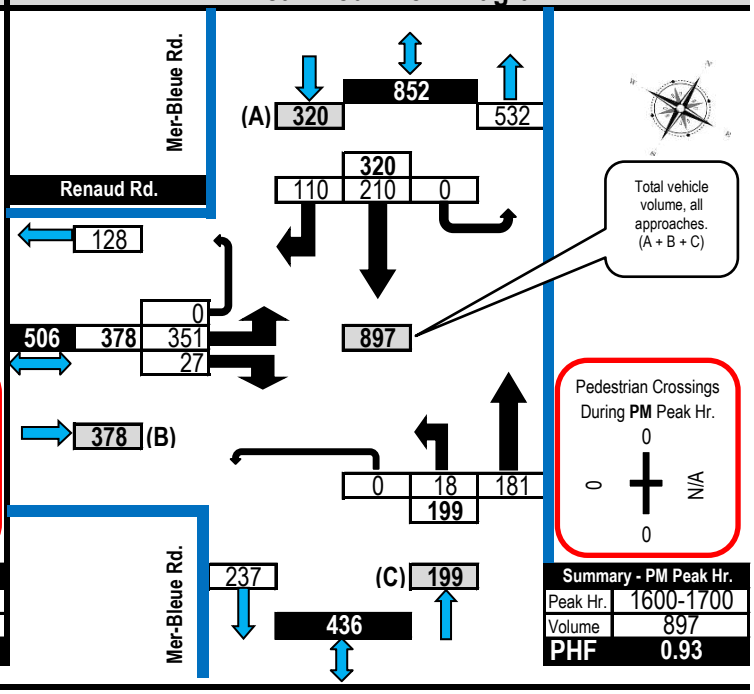


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0730-0830
Volume	492
PHF	0.94

PM Peak Hour Flow Diagram



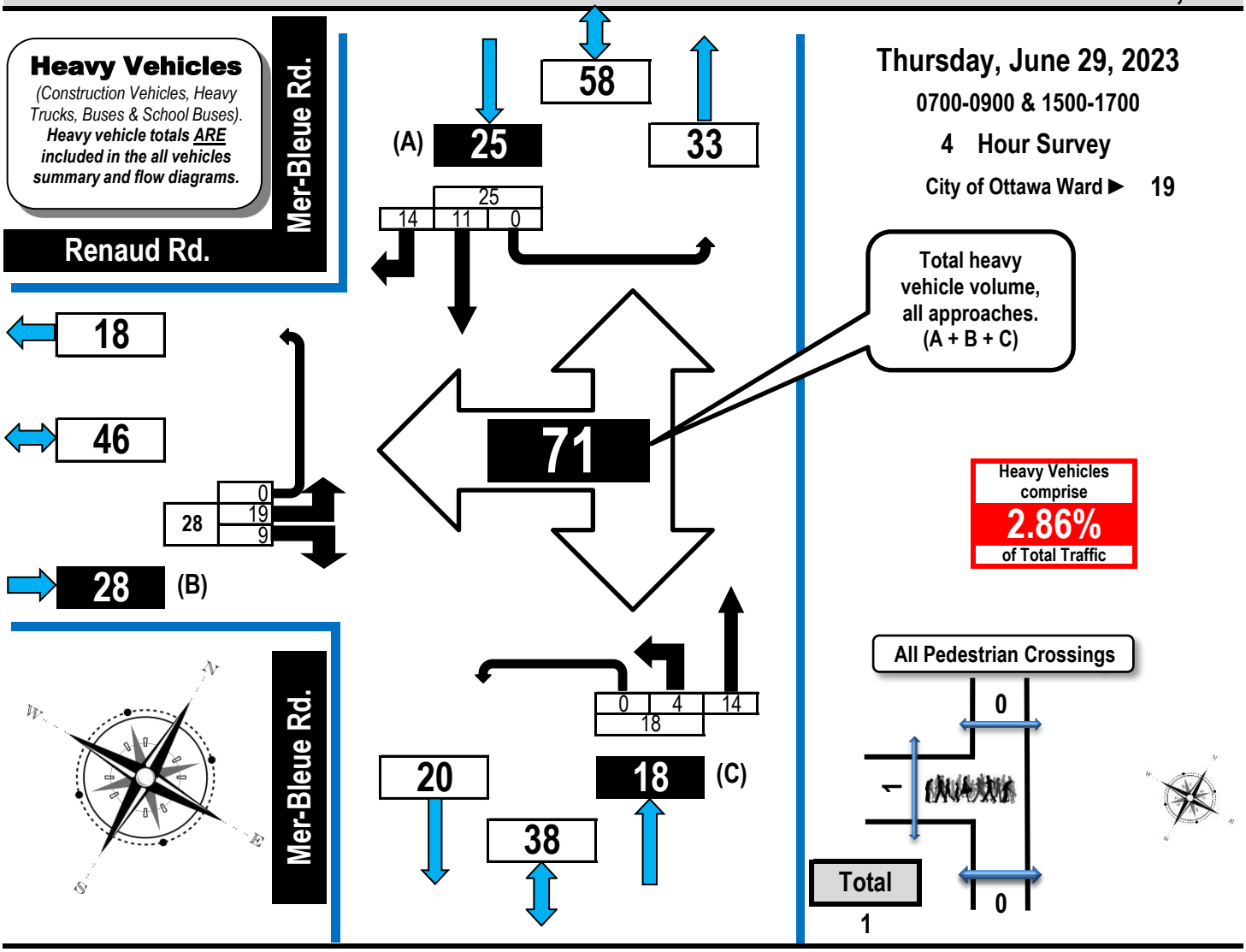
Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	897
PHF	0.93

Turning Movement Count
Heavy Vehicle Summary (FHWA Class 4 to 13)
Flow Diagram

Mer-Bleue Road & Renaud Road — Orléans, ON

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals ARE included in the all vehicles summary and flow diagrams.

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



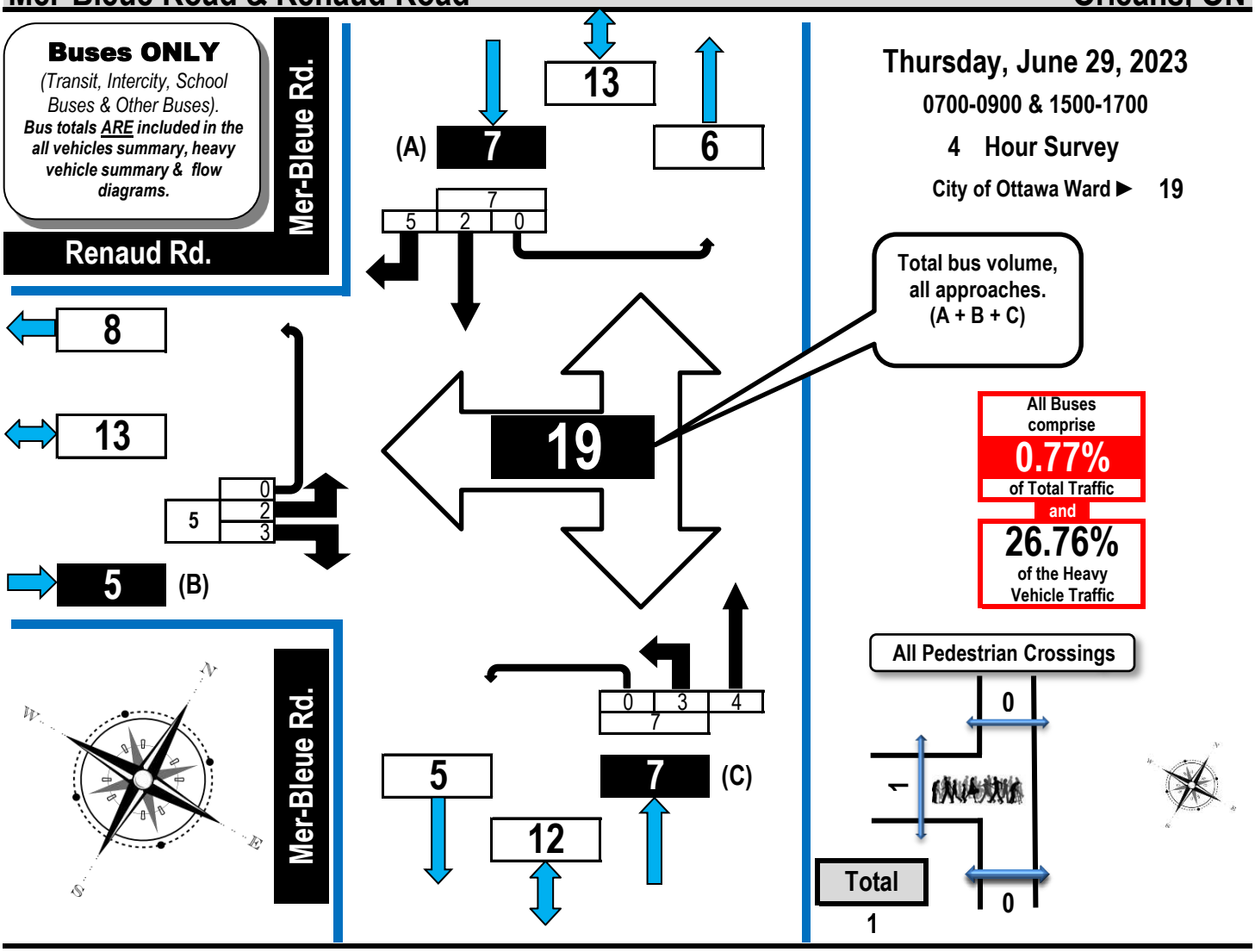
	Renaud Rd.					N/A					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	5		1	0	6						0	5		0	5		1	3	0	4	15
0800-0900	5		3	0	8						2	4		0	6		2	6	0	8	22
1500-1600	2		2	0	4						0	4		0	4		2	2	0	4	12
1600-1700	7		3	0	10						2	1		0	3		6	3	0	9	22
Totals	19		9	0	28						4	14		0	18		11	14	0	25	71

Turning Movement Count
All Buses Summary (FHWA Class 4 ONLY)
Flow Diagram

Mer-Bleue Road & Renaud Road — Orléans, ON

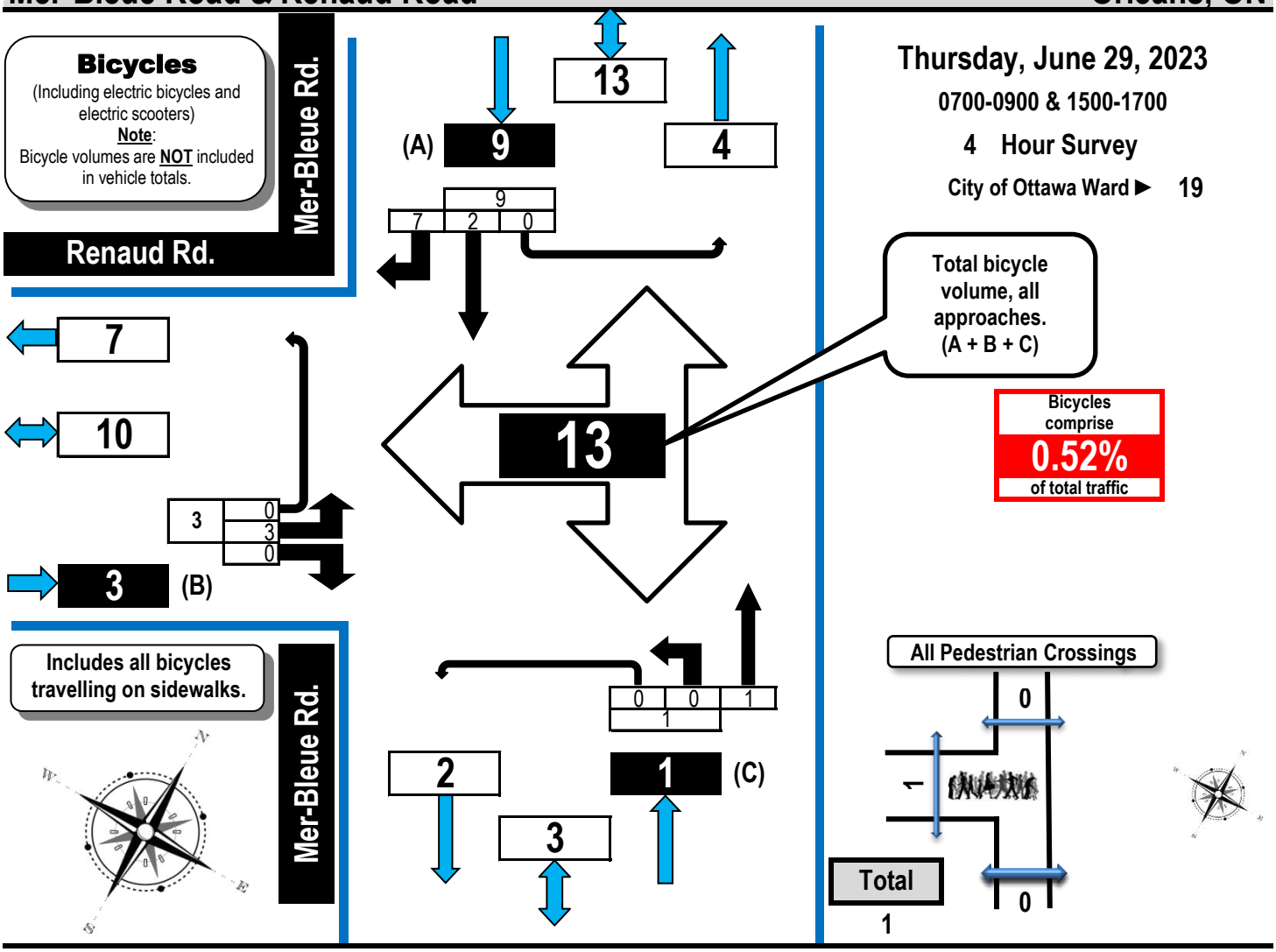
Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



	Renaud Rd.					N/A					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0		0	0	0						0	3		0	3		0	1	0	1	4
0800-0900	1		0	0	1						2	0		0	2		0	2	0	2	5
1500-1600	0		0	0	0						0	1		0	1		0	0	0	0	1
1600-1700	1		3	0	4						1	0		0	1		2	2	0	4	9
Totals	2		3	0	5						3	4		0	7		2	5	0	7	19

Turning Movement Count
Bicycle Summary
Flow Diagram



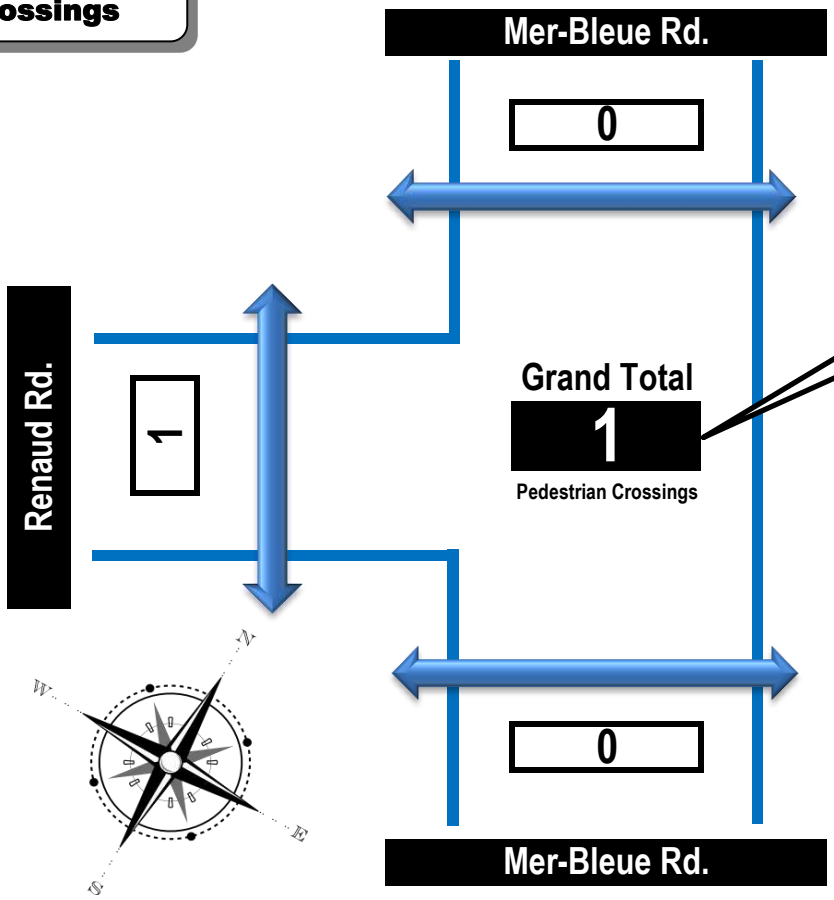
	Renaud Rd.					N/A					Mer-Bleue Rd.					Mer-Bleue Rd.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	1		0	0	1						0	0		0	0		0	0	0	0	1
0800-0900	0		0	0	0						0	0		0	0		1	1	0	2	2
1500-1600	2		0	0	2						0	1		0	1		0	3	0	3	6
1600-1700	0		0	0	0						0	0		0	0		1	3	0	4	4
Totals	3		0	0	3						0	1		0	1		2	7	0	9	13

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Mer-Bleue Road & Renaud Road — Orléans, ON

Pedestrian Crossings

Thursday, June 29, 2023
0700-0900 & 1500-1700
4 Hour Survey
City of Ottawa Ward ► 19



Note
*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.*

Time Period	West Side Crossing Renaud Rd.	East Side Crossing N/A	Street Total	South Side Crossing Mer-Bleue Rd.	North Side Crossing Mer-Bleue Rd.	Street Total	Grand Total
0700-0800	0		0	0	0	0	0
0800-0900	1		1	0	0	0	1
1500-1600	0		0	0	0	0	0
1600-1700	0		0	0	0	0	0
Totals	1		1	0	0	0	1

Comments:
Para Transpo and school buses comprise 26.76% of the heavy vehicle traffic. There was one conflict - 1553 h - between an E/B left turn and a S/B straight through vehicle.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles

Mer-Bleue Road & Renaud Road — Orléans, ON

Survey Date: Thursday, June 29, 2023 **Start Time:** 0700 **AADT Factor:** 0.9
Weather AM: Hazy 18° C **Survey Duration:** 4 Hrs. **Survey Hours:** 0700-0900 & 1500-1700
Weather PM: Hazy 26° C **Surveyor(s):** T. Carmody

	Renaud Rd.					N/A						Mer-Bleue Rd.					Mer-Bleue Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800	93	0	11	0	104	0	0	0	0	0	104	20	131	0	0	151	0	71	116	0	187	338	442
0800-0900	120	0	14	1	135	0	0	0	0	0	135	11	131	0	0	142	0	77	100	0	177	319	454
1500-1600	254	0	22	0	276	0	0	0	0	0	276	16	148	0	0	164	0	154	93	1	248	412	688
1600-1700	351	0	27	0	378	0	0	0	0	0	378	18	181	0	0	199	0	210	110	0	320	519	897
Totals	818	0	74	1	893	0	0	0	0	0	893	65	591	0	0	656	0	512	419	1	932	1588	2481

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 ➡12 expansion factor of 1.39

Equ. 12 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 ➡24 expansion factor of 1.31

AADT 24 Hr	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡				0.94								Highest Hourly Vehicle Volume Between 0700h & 1000h											
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Total
0730-0830	113	0	14	1	128	0	0	0	0	0	128	12	157	0	0	169	0	78	117	0	195	364	492

PM Peak Hour Factor ➡				0.93								Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot	Gr. Tot.
1600-1700	351	0	27	0	378	0	0	0	0	0	378	18	181	0	0	199	0	210	110	0	320	519	897

Comments:

Para Transpo and school buses comprise 26.76% of the heavy vehicle traffic. There was one conflict - 1553 h - between an E/B left turn and a S/B straight through vehicle.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

Appendix D

Transportation Demand Management Checklist

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

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

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

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

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	X
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	X
	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	X
	2.2	**Bicycle skills training**	
		Commuter travel	
BETTER ★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
	2.3	**Valet bike parking**	
		Visitor travel	
BETTER	2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

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

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

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

Appendix E

Swept Path Vehicle Turning Templates

Appendix F

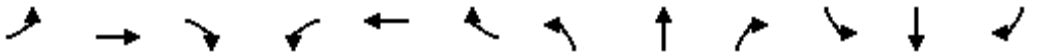
Detailed Segment MMLOS Calculation

Appendix F

		Monardia Way	Jérome Jodoin Drive
Pedestrian	Sidewalk Wdith	2.0 or more	2.0 or more
	Boulevard Width	0m	0m
	Average Daily Curb Lane Traffic Volume	< 3000 vpd	< 3000 vpd
	On-street Parking	Yes	Yes
	Operating Speed	40km/h	40km/h
	Level of Service	B	B
	Target	C	C
Cyclist	Road Classification	Local	Local
	Bike Route Classification	N/A	N/A
	Type of Bikeway	Unsignalized Crossing with no median refuge	Unsignalized Crossing with no median refuge
	Travel Lanes	1	1
	Centerline Markings	No	No
	Operating Speed	40km/h	40km/h
	Level of Service	A	A
	Target	B	B
Transit	Facility Type	Segregated ROW	Segregated ROW
	Friction/Congestion/Incident Potential	Limited	Limited
	Level of Service	A	A
	Target	D	D
Truck	Lane Width	>3.7m	>3.7m
	Travel Lanes	2	2
	Level of Service	B	B
	Target	N/A	N/A

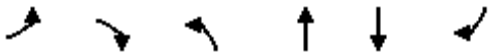
Appendix G

Detailed Synchro Report



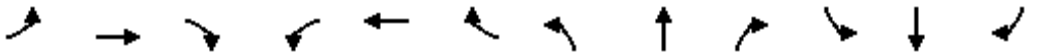
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	3	1	54	0	241	2	275	18	35	140	5
Future Volume (vph)	2	3	1	54	0	241	2	275	18	35	140	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.977			0.890			0.992			0.996	
Flt Protected		0.984			0.991						0.990	
Satd. Flow (prot)	0	1661	0	0	1524	0	0	1714	0	0	3238	0
Flt Permitted		0.984			0.991						0.990	
Satd. Flow (perm)	0	1661	0	0	1524	0	0	1714	0	0	3238	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			400.2			37.7			607.0	
Travel Time (s)		33.8			28.8			2.7			43.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	3	1	60	0	268	2	306	20	39	156	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	328	0	0	328	0	0	201	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			



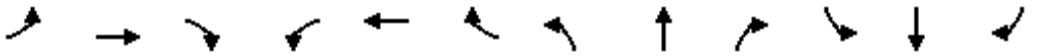
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	113	14	12	182	78	117
Future Volume (vph)	113	14	12	182	78	117
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985				0.919	
Flt Protected	0.958			0.997		
Satd. Flow (prot)	1615	0	0	1706	1573	0
Flt Permitted	0.958			0.997		
Satd. Flow (perm)	1615	0	0	1706	1573	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	267.8	
Travel Time (s)	6.6			34.9	19.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	126	16	13	202	87	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	142	0	0	215	217	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			



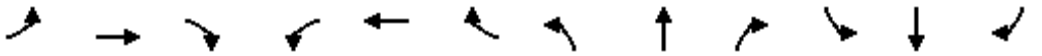
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	89	10	28	271	13	41	35	36	12	43	56
Future Volume (vph)	12	89	10	28	271	13	41	35	36	12	43	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.995			0.957			0.932	
Flt Protected		0.995			0.996			0.982			0.995	
Satd. Flow (prot)	0	1683	0	0	1696	0	0	1608	0	0	1587	0
Flt Permitted		0.995			0.996			0.982			0.995	
Satd. Flow (perm)	0	1683	0	0	1696	0	0	1608	0	0	1587	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		400.2			250.7			259.0			127.1	
Travel Time (s)		28.8			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	99	11	31	301	14	46	39	40	13	48	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	0	0	346	0	0	125	0	0	123	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		



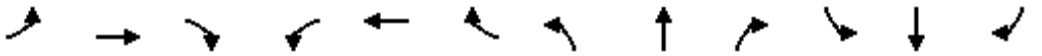
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	8	9	0	19	22	19	65	0	9	31	41
Future Volume (vph)	25	8	9	0	19	22	19	65	0	9	31	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.928						0.931	
Flt Protected		0.971						0.989			0.994	
Satd. Flow (prot)	0	1568	0	0	1544	0	0	1645	0	0	1539	0
Flt Permitted		0.971						0.989			0.994	
Satd. Flow (perm)	0	1568	0	0	1544	0	0	1645	0	0	1539	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	28	9	10	0	21	24	21	72	0	10	34	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	45	0	0	93	0	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.1%		ICU Level of Service A	
Analysis Period (min) 15			



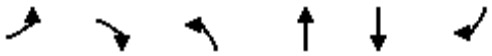
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	0	1	20	1	62	1	11	28	1
Future Volume (vph)	2	0	0	0	1	20	1	62	1	11	28	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.871			0.998			0.997	
Flt Protected		0.950						0.999			0.987	
Satd. Flow (prot)	0	1483	0	0	1360	0	0	1557	0	0	1536	0
Flt Permitted		0.950						0.999			0.987	
Satd. Flow (perm)	0	1483	0	0	1360	0	0	1557	0	0	1536	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			131.9			168.5	
Travel Time (s)		7.9			13.2			9.5			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	0	0	1	22	1	69	1	12	31	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	23	0	0	71	0	0	44	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		



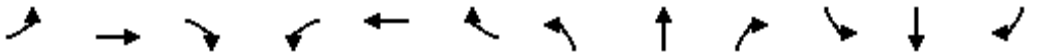
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	6	1	35	1	126	0	453	93	184	322	3
Future Volume (vph)	5	6	1	35	1	126	0	453	93	184	322	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.990			0.895			0.977			0.999	
Flt Protected		0.979			0.989						0.982	
Satd. Flow (prot)	0	1675	0	0	1530	0	0	1688	0	0	3221	0
Flt Permitted		0.979			0.989						0.982	
Satd. Flow (perm)	0	1675	0	0	1530	0	0	1688	0	0	3221	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			400.2			37.7			607.0	
Travel Time (s)		33.8			28.8			2.7			43.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	7	1	39	1	140	0	503	103	204	358	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	180	0	0	606	0	0	565	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			



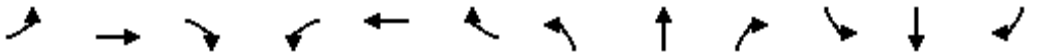
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	351	27	18	195	248	110
Future Volume (vph)	351	27	18	195	248	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.990				0.959	
Flt Protected	0.956			0.996		
Satd. Flow (prot)	1620	0	0	1705	1641	0
Flt Permitted	0.956			0.996		
Satd. Flow (perm)	1620	0	0	1705	1641	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	267.8	
Travel Time (s)	6.6			34.9	19.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	390	30	20	217	276	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	420	0	0	237	398	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



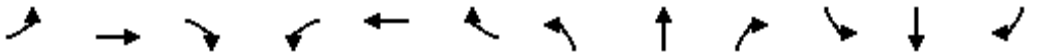
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	202	18	31	111	15	17	26	41	18	30	21
Future Volume (vph)	18	202	18	31	111	15	17	26	41	18	30	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.990			0.987			0.934			0.959	
Flt Protected		0.996			0.990			0.990			0.987	
Satd. Flow (prot)	0	1688	0	0	1672	0	0	1583	0	0	1620	0
Flt Permitted		0.996			0.990			0.990			0.987	
Satd. Flow (perm)	0	1688	0	0	1672	0	0	1583	0	0	1620	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		400.2			250.7			259.0			127.1	
Travel Time (s)		28.8			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	224	20	34	123	17	19	29	46	20	33	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	0	0	174	0	0	94	0	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			



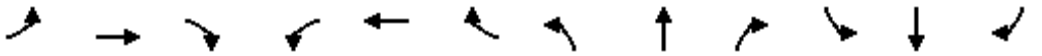
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	22	16	0	11	15	16	41	0	22	35	22
Future Volume (vph)	28	22	16	0	11	15	16	41	0	22	35	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.921						0.963	
Flt Protected		0.979						0.986			0.986	
Satd. Flow (prot)	0	1575	0	0	1532	0	0	1640	0	0	1580	0
Flt Permitted		0.979						0.986			0.986	
Satd. Flow (perm)	0	1575	0	0	1532	0	0	1640	0	0	1580	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	24	18	0	12	17	18	46	0	24	39	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	29	0	0	64	0	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.4%		ICU Level of Service A	
Analysis Period (min) 15			



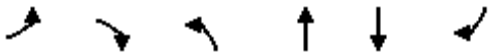
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	1	1	1	16	1	40	1	24	24	3
Future Volume (vph)	1	0	1	1	1	16	1	40	1	24	24	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.878			0.997			0.993	
Flt Protected		0.976			0.998			0.999			0.977	
Satd. Flow (prot)	0	1420	0	0	1368	0	0	1555	0	0	1515	0
Flt Permitted		0.976			0.998			0.999			0.977	
Satd. Flow (perm)	0	1420	0	0	1368	0	0	1555	0	0	1515	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			131.9			168.5	
Travel Time (s)		7.9			13.2			9.5			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	0	1	1	1	18	1	44	1	27	27	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	20	0	0	46	0	0	57	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		



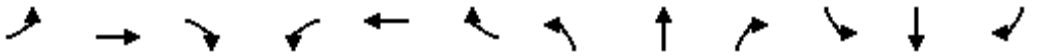
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	59	1	55	74	246	2	281	18	36	143	5
Future Volume (vph)	2	59	1	55	74	246	2	281	18	36	143	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.911			0.991			0.996	
Flt Protected		0.999			0.993						0.990	
Satd. Flow (prot)	0	1723	0	0	1563	0	0	3254	0	0	3238	0
Flt Permitted		0.999			0.993						0.990	
Satd. Flow (perm)	0	1723	0	0	1563	0	0	3254	0	0	3238	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	66	1	61	82	273	2	312	20	40	159	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	416	0	0	334	0	0	205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		



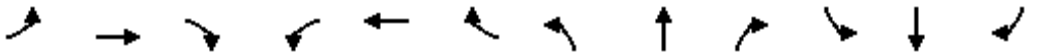
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	14	12	186	80	119
Future Volume (vph)	115	14	12	186	80	119
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985				0.919	
Flt Protected	0.957			0.997		
Satd. Flow (prot)	1613	0	0	1706	1573	0
Flt Permitted	0.957			0.997		
Satd. Flow (perm)	1613	0	0	1706	1573	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	128	16	13	207	89	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	220	221	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			



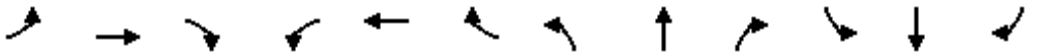
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	91	10	29	276	13	42	87	37	12	44	57
Future Volume (vph)	12	91	10	29	276	13	42	87	37	12	44	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.995			0.970			0.932	
Flt Protected		0.995			0.995			0.987			0.995	
Satd. Flow (prot)	0	1683	0	0	1694	0	0	1639	0	0	1587	0
Flt Permitted		0.995			0.995			0.987			0.995	
Satd. Flow (perm)	0	1683	0	0	1694	0	0	1639	0	0	1587	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	101	11	32	307	14	47	97	41	13	49	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	353	0	0	185	0	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			



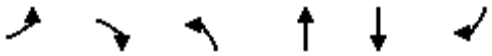
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	8	9	0	19	22	19	117	0	9	32	42
Future Volume (vph)	26	8	9	0	19	22	19	117	0	9	32	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.972			0.928						0.932	
Flt Protected		0.971						0.993			0.995	
Satd. Flow (prot)	0	1570	0	0	1544	0	0	1652	0	0	1543	0
Flt Permitted		0.971						0.993			0.995	
Satd. Flow (perm)	0	1570	0	0	1544	0	0	1652	0	0	1543	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	9	10	0	21	24	21	130	0	10	36	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	45	0	0	151	0	0	93	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.8%		ICU Level of Service A	
Analysis Period (min) 15			



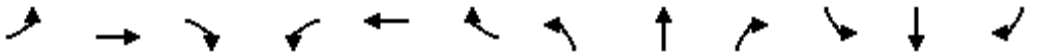
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	0	1	20	1	114	1	11	29	1
Future Volume (vph)	2	0	0	0	1	20	1	114	1	11	29	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.871			0.999			0.997	
Flt Protected		0.950									0.987	
Satd. Flow (prot)	0	1483	0	0	1360	0	0	1560	0	0	1536	0
Flt Permitted		0.950									0.987	
Satd. Flow (perm)	0	1483	0	0	1360	0	0	1560	0	0	1536	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	0	0	1	22	1	127	1	12	32	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	23	0	0	129	0	0	45	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		



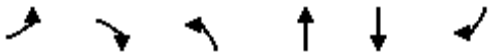
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	116	0	0	0	29	0
Future Volume (vph)	116	0	0	0	29	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1566	0	0	1648	1648	0
Flt Permitted	0.950					
Satd. Flow (perm)	1566	0	0	1648	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	129	0	0	0	32	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		



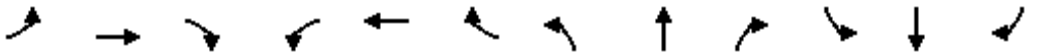
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	6	1	36	1	129	0	462	95	188	328	3
Future Volume (vph)	5	6	1	36	1	129	0	462	95	188	328	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.989			0.895			0.974			0.999	
Flt Protected		0.980			0.989						0.982	
Satd. Flow (prot)	0	1675	0	0	1530	0	0	3198	0	0	3221	0
Flt Permitted		0.980			0.989						0.982	
Satd. Flow (perm)	0	1675	0	0	1530	0	0	3198	0	0	3221	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	6	1	36	1	129	0	462	95	188	328	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	166	0	0	557	0	0	519	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			



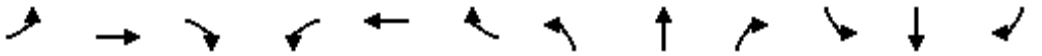
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	358	28	18	199	253	112
Future Volume (vph)	358	28	18	199	253	112
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.990				0.959	
Flt Protected	0.956			0.996		
Satd. Flow (prot)	1620	0	0	1705	1641	0
Flt Permitted	0.956			0.996		
Satd. Flow (perm)	1620	0	0	1705	1641	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	358	28	18	199	253	112
Shared Lane Traffic (%)						
Lane Group Flow (vph)	386	0	0	217	365	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			



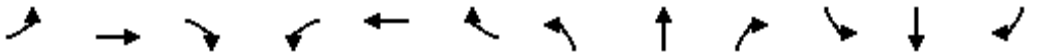
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	252	18	32	126	15	17	27	42	18	31	21
Future Volume (vph)	18	252	18	32	126	15	17	27	42	18	31	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.988			0.934			0.959	
Flt Protected		0.997			0.991			0.990			0.987	
Satd. Flow (prot)	0	1693	0	0	1676	0	0	1583	0	0	1620	0
Flt Permitted		0.997			0.991			0.990			0.987	
Satd. Flow (perm)	0	1693	0	0	1676	0	0	1583	0	0	1620	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	18	252	18	32	126	15	17	27	42	18	31	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	288	0	0	173	0	0	86	0	0	70	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 32.5%		ICU Level of Service A	
Analysis Period (min) 15			



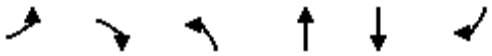
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	22	16	0	11	15	16	42	0	22	36	22
Future Volume (vph)	29	22	16	0	11	15	16	42	0	22	36	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968			0.922						0.963	
Flt Protected		0.979						0.986			0.986	
Satd. Flow (prot)	0	1577	0	0	1534	0	0	1640	0	0	1580	0
Flt Permitted		0.979						0.986			0.986	
Satd. Flow (perm)	0	1577	0	0	1534	0	0	1640	0	0	1580	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	22	16	0	11	15	16	42	0	22	36	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	26	0	0	58	0	0	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.5%		ICU Level of Service A	
Analysis Period (min) 15			



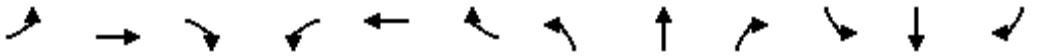
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	1	1	1	18	1	41	1	24	24	3
Future Volume (vph)	1	0	1	1	1	18	1	41	1	24	24	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.878			0.997			0.992	
Flt Protected		0.976			0.998			0.999			0.977	
Satd. Flow (prot)	0	1420	0	0	1368	0	0	1555	0	0	1513	0
Flt Permitted		0.976			0.998			0.999			0.977	
Satd. Flow (perm)	0	1420	0	0	1368	0	0	1555	0	0	1513	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	0	1	1	1	18	1	41	1	24	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	20	0	0	43	0	0	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	0	0	0	27	0
Future Volume (vph)	42	0	0	0	27	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1566	0	0	1648	1648	0
Flt Permitted	0.950					
Satd. Flow (perm)	1566	0	0	1648	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	42	0	0	0	27	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	0	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

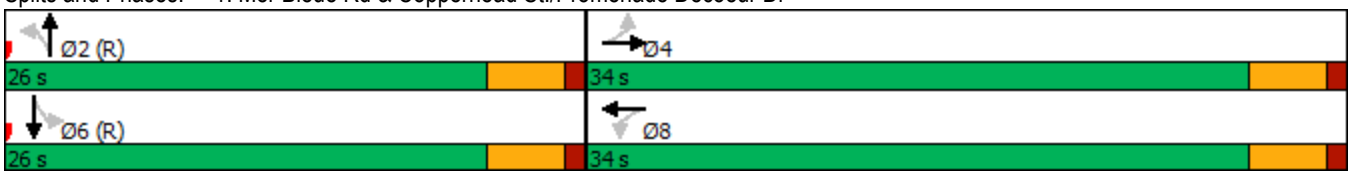


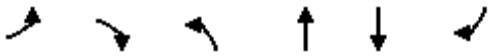
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	65	1	61	82	271	2	310	20	39	158	6
Future Volume (vph)	2	65	1	61	82	271	2	310	20	39	158	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.912			0.991			0.994	
Flt Protected		0.999			0.993		0.950			0.950		
Satd. Flow (prot)	0	1723	0	0	1565	0	1642	3254	0	1642	3264	0
Flt Permitted		0.992			0.941		0.636			0.534		
Satd. Flow (perm)	0	1711	0	0	1483	0	1099	3254	0	923	3264	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			223			12			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	72	1	68	91	301	2	344	22	43	176	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	460	0	2	366	0	43	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		26.0	26.0		26.0	26.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	29.5	29.5		29.5	29.5		21.5	21.5		21.5	21.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		16.8			16.8		34.2	34.2		34.2	34.2	
Actuated g/C Ratio		0.28			0.28		0.57	0.57		0.57	0.57	
v/c Ratio		0.16			0.80		0.00	0.20		0.08	0.10	
Control Delay		13.6			19.8		9.5	8.2		9.7	8.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		13.6			19.8		9.5	8.2		9.7	8.0	
LOS		B			B		A	A		A	A	
Approach Delay		13.6			19.8			8.2			8.3	
Approach LOS		B			B			A			A	
Queue Length 50th (m)		6.1			22.9		0.1	8.7		1.9	4.1	
Queue Length 95th (m)		10.4			39.5		1.2	21.5		8.3	11.6	
Internal Link Dist (m)		445.4			369.6			127.0			574.4	
Turn Bay Length (m)							40.0			40.0		
Base Capacity (vph)		841			842		626	1858		525	1862	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.09			0.55		0.00	0.20		0.08	0.10	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

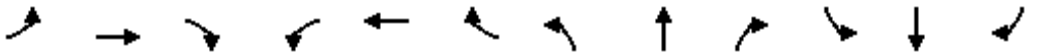
Splits and Phases: 1: Mer Bleue Rd & Copperhead St./Promenade Decoeur Dr





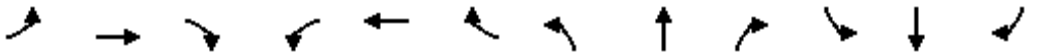
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	127	16	14	205	88	132
Future Volume (vph)	127	16	14	205	88	132
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985				0.919	
Flt Protected	0.958			0.997		
Satd. Flow (prot)	1615	0	0	1706	1573	0
Flt Permitted	0.958			0.997		
Satd. Flow (perm)	1615	0	0	1706	1573	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	141	18	16	228	98	147
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	0	244	245	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.6%		ICU Level of Service A	
Analysis Period (min) 15			



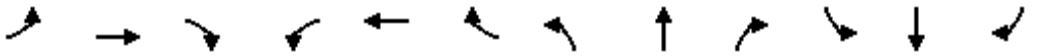
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	100	11	32	305	15	46	96	41	14	48	63
Future Volume (vph)	14	100	11	32	305	15	46	96	41	14	48	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.994			0.970			0.932	
Flt Protected		0.994			0.995			0.988			0.994	
Satd. Flow (prot)	0	1681	0	0	1693	0	0	1640	0	0	1586	0
Flt Permitted		0.994			0.995			0.988			0.994	
Satd. Flow (perm)	0	1681	0	0	1693	0	0	1640	0	0	1586	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	16	111	12	36	339	17	51	107	46	16	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	392	0	0	204	0	0	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			



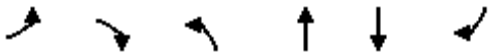
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	9	10	0	21	25	21	130	0	10	35	46
Future Volume (vph)	28	9	10	0	21	25	21	130	0	10	35	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.926						0.932	
Flt Protected		0.971						0.993			0.995	
Satd. Flow (prot)	0	1568	0	0	1540	0	0	1652	0	0	1543	0
Flt Permitted		0.971						0.993			0.995	
Satd. Flow (perm)	0	1568	0	0	1540	0	0	1652	0	0	1543	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	10	11	0	23	28	23	144	0	11	39	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	51	0	0	167	0	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			



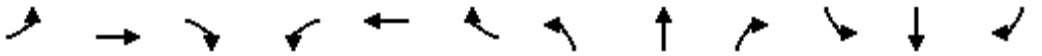
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	0	1	23	1	126	1	12	32	1
Future Volume (vph)	2	0	0	0	1	23	1	126	1	12	32	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.870			0.999			0.997	
Flt Protected		0.950									0.987	
Satd. Flow (prot)	0	1483	0	0	1358	0	0	1560	0	0	1536	0
Flt Permitted		0.950									0.987	
Satd. Flow (perm)	0	1483	0	0	1358	0	0	1560	0	0	1536	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	0	0	0	1	26	1	140	1	13	36	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	27	0	0	142	0	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.2%		ICU Level of Service A	
Analysis Period (min) 15			

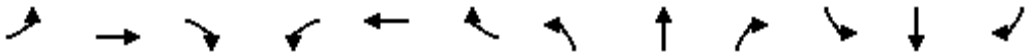


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	128	0	0	0	32	0
Future Volume (vph)	128	0	0	0	32	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1566	0	0	1648	1648	0
Flt Permitted	0.950					
Satd. Flow (perm)	1566	0	0	1648	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	142	0	0	0	36	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	142	0	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.5%		ICU Level of Service A	
Analysis Period (min) 15			



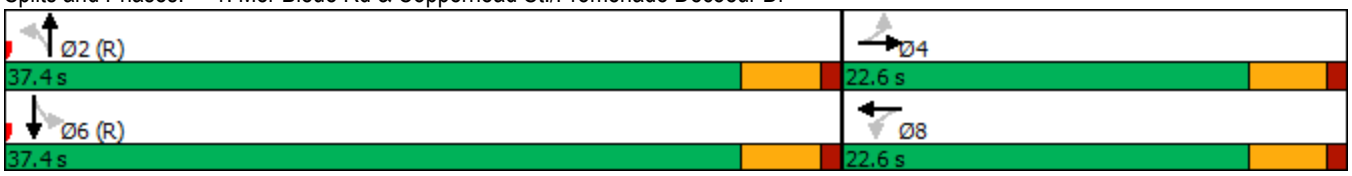
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	1	39	1	142	0	510	105	207	363	3
Future Volume (vph)	6	7	1	39	1	142	0	510	105	207	363	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.990			0.895			0.974			0.999	
Flt Protected		0.979			0.989					0.950		
Satd. Flow (prot)	0	1675	0	0	1530	0	1728	3198	0	1642	3280	0
Flt Permitted		0.858			0.922					0.419		
Satd. Flow (perm)	0	1468	0	0	1426	0	1728	3198	0	724	3280	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			142			64			2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	6	7	1	39	1	142	0	510	105	207	363	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	182	0	0	615	0	207	366	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

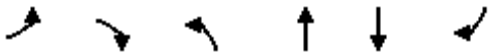


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6		37.4	37.4		37.4	37.4	
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	18.1	18.1		18.1	18.1		32.9	32.9		32.9	32.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.2			8.2			42.8		42.8	42.8	
Actuated g/C Ratio		0.14			0.14			0.71		0.71	0.71	
v/c Ratio		0.07			0.57			0.27		0.40	0.16	
Control Delay		20.4			14.9			3.4		7.2	3.4	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		20.4			14.9			3.4		7.2	3.4	
LOS		C			B			A		A	A	
Approach Delay		20.4			14.9			3.4			4.8	
Approach LOS		C			B			A			A	
Queue Length 50th (m)		1.3			4.1			7.5		6.3	4.6	
Queue Length 95th (m)		5.0			17.4			18.2		23.2	11.7	
Internal Link Dist (m)		445.4			369.6			127.0			574.4	
Turn Bay Length (m)										40.0		
Base Capacity (vph)		443			529			2300		516	2341	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.03			0.34			0.27		0.40	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

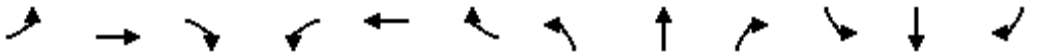
Splits and Phases: 1: Mer Bleue Rd & Copperhead St./Promenade Decoeur Dr





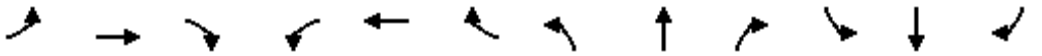
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	395	30	20	220	279	124
Future Volume (vph)	395	30	20	220	279	124
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.990				0.958	
Flt Protected	0.956			0.996		
Satd. Flow (prot)	1620	0	0	1705	1640	0
Flt Permitted	0.956			0.996		
Satd. Flow (perm)	1620	0	0	1705	1640	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	395	30	20	220	279	124
Shared Lane Traffic (%)						
Lane Group Flow (vph)	425	0	0	240	403	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			



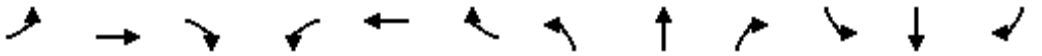
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	227	20	35	125	17	19	29	46	20	34	24
Future Volume (vph)	20	227	20	35	125	17	19	29	46	20	34	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.990			0.987			0.934			0.958	
Flt Protected		0.996			0.990			0.990			0.987	
Satd. Flow (prot)	0	1688	0	0	1672	0	0	1583	0	0	1618	0
Flt Permitted		0.996			0.990			0.990			0.987	
Satd. Flow (perm)	0	1688	0	0	1672	0	0	1583	0	0	1618	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	227	20	35	125	17	19	29	46	20	34	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	267	0	0	177	0	0	94	0	0	78	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 33.0%		ICU Level of Service A	
Analysis Period (min) 15			



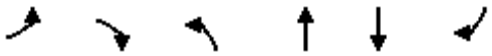
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	25	18	0	12	17	18	46	0	25	39	25
Future Volume (vph)	32	25	18	0	12	17	18	46	0	25	39	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968			0.921						0.962	
Flt Protected		0.979						0.986			0.986	
Satd. Flow (prot)	0	1577	0	0	1532	0	0	1640	0	0	1578	0
Flt Permitted		0.979						0.986			0.986	
Satd. Flow (perm)	0	1577	0	0	1532	0	0	1640	0	0	1578	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	32	25	18	0	12	17	18	46	0	25	39	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	29	0	0	64	0	0	89	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.7%		ICU Level of Service A	
Analysis Period (min) 15			



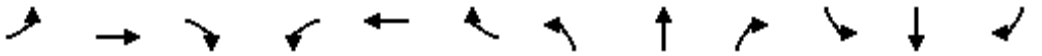
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	1	1	1	18	1	45	1	27	27	3
Future Volume (vph)	1	0	1	1	1	18	1	45	1	27	27	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.932			0.878			0.997			0.993	
Flt Protected		0.976			0.998			0.999			0.977	
Satd. Flow (prot)	0	1420	0	0	1368	0	0	1555	0	0	1515	0
Flt Permitted		0.976			0.998			0.999			0.977	
Satd. Flow (perm)	0	1420	0	0	1368	0	0	1555	0	0	1515	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	0	1	1	1	18	1	45	1	27	27	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	20	0	0	47	0	0	57	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.9%		ICU Level of Service A	
Analysis Period (min) 15			



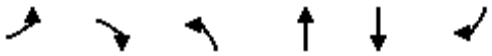
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	0	0	0	29	0
Future Volume (vph)	46	0	0	0	29	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1566	0	0	1648	1648	0
Flt Permitted	0.950					
Satd. Flow (perm)	1566	0	0	1648	1648	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	46	0	0	0	29	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



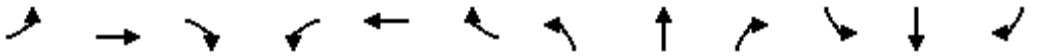
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	59	1	71	74	331	2	281	39	137	143	5
Future Volume (vph)	2	59	1	71	74	331	2	281	39	137	143	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.906			0.982			0.997	
Flt Protected		0.999			0.993						0.977	
Satd. Flow (prot)	0	1723	0	0	1555	0	0	3224	0	0	3198	0
Flt Permitted		0.999			0.993						0.977	
Satd. Flow (perm)	0	1723	0	0	1555	0	0	3224	0	0	3198	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	66	1	79	82	368	2	312	43	152	159	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	529	0	0	357	0	0	317	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			



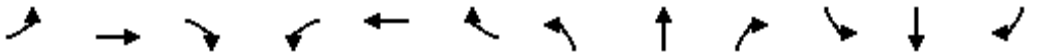
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	134	14	12	188	80	135
Future Volume (vph)	134	14	12	188	80	135
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.987				0.915	
Flt Protected	0.957			0.997		
Satd. Flow (prot)	1632	0	0	1723	1581	0
Flt Permitted	0.957			0.997		
Satd. Flow (perm)	1632	0	0	1723	1581	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	149	16	13	209	89	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	0	222	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			



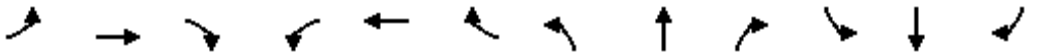
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	91	132	49	276	13	145	87	54	12	44	57
Future Volume (vph)	12	91	132	49	276	13	145	87	54	12	44	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.924			0.995			0.975			0.932	
Flt Protected		0.998			0.993			0.975			0.995	
Satd. Flow (prot)	0	1578	0	0	1691	0	0	1627	0	0	1587	0
Flt Permitted		0.998			0.993			0.975			0.995	
Satd. Flow (perm)	0	1578	0	0	1691	0	0	1627	0	0	1587	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	101	147	54	307	14	161	97	60	13	49	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	375	0	0	318	0	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			



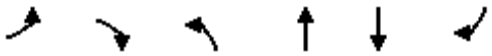
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	8	9	0	19	22	19	237	0	9	167	48
Future Volume (vph)	26	8	9	0	19	22	19	237	0	9	167	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.972			0.928						0.971	
Flt Protected		0.971						0.996			0.998	
Satd. Flow (prot)	0	1570	0	0	1544	0	0	1657	0	0	1612	0
Flt Permitted		0.971						0.996			0.998	
Satd. Flow (perm)	0	1570	0	0	1544	0	0	1657	0	0	1612	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	9	10	0	21	24	21	263	0	10	186	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	45	0	0	284	0	0	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			



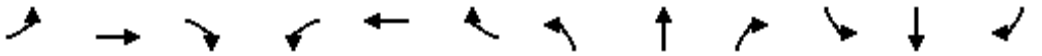
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	2	0	1	20	1	228	1	11	164	1
Future Volume (vph)	8	0	2	0	1	20	1	228	1	11	164	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.871			0.999			0.999	
Flt Protected		0.961									0.997	
Satd. Flow (prot)	0	1463	0	0	1360	0	0	1560	0	0	1555	0
Flt Permitted		0.961									0.997	
Satd. Flow (perm)	0	1463	0	0	1360	0	0	1560	0	0	1555	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	9	0	2	0	1	22	1	253	1	12	182	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	23	0	0	255	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.6%		ICU Level of Service A	
Analysis Period (min) 15			



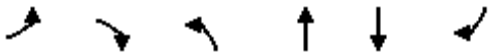
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	230	38	0	0	31	134
Future Volume (vph)	230	38	0	0	31	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.981				0.890	
Flt Protected	0.959					
Satd. Flow (prot)	1551	0	0	1648	1467	0
Flt Permitted	0.959					
Satd. Flow (perm)	1551	0	0	1648	1467	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	256	42	0	0	34	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	298	0	0	0	183	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.0%		ICU Level of Service A	
Analysis Period (min) 15			



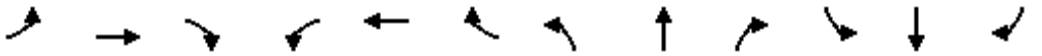
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	6	1	42	1	161	0	462	102	216	328	3
Future Volume (vph)	5	6	1	42	1	161	0	462	102	216	328	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.989			0.893			0.973			0.999	
Flt Protected		0.980			0.990						0.981	
Satd. Flow (prot)	0	1675	0	0	1528	0	0	3195	0	0	3218	0
Flt Permitted		0.980			0.990						0.981	
Satd. Flow (perm)	0	1675	0	0	1528	0	0	3195	0	0	3218	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	6	1	42	1	161	0	462	102	216	328	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	204	0	0	564	0	0	547	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		



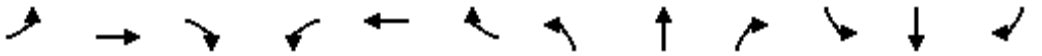
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	364	28	18	201	253	118
Future Volume (vph)	364	28	18	201	253	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.990				0.957	
Flt Protected	0.956			0.996		
Satd. Flow (prot)	1620	0	0	1705	1638	0
Flt Permitted	0.956			0.996		
Satd. Flow (perm)	1620	0	0	1705	1638	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	364	28	18	201	253	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	392	0	0	219	371	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			



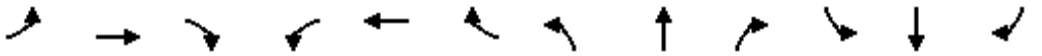
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	252	53	39	126	15	55	27	49	18	31	21
Future Volume (vph)	18	252	53	39	126	15	55	27	49	18	31	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.978			0.989			0.950			0.959	
Flt Protected		0.997			0.989			0.979			0.987	
Satd. Flow (prot)	0	1669	0	0	1674	0	0	1592	0	0	1620	0
Flt Permitted		0.997			0.989			0.979			0.987	
Satd. Flow (perm)	0	1669	0	0	1674	0	0	1592	0	0	1620	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	18	252	53	39	126	15	55	27	49	18	31	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	323	0	0	180	0	0	131	0	0	70	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			



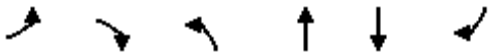
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	22	16	0	11	15	16	87	0	22	71	28
Future Volume (vph)	29	22	16	0	11	15	16	87	0	22	71	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968			0.922						0.969	
Flt Protected		0.979						0.992			0.991	
Satd. Flow (prot)	0	1577	0	0	1534	0	0	1650	0	0	1597	0
Flt Permitted		0.979						0.992			0.991	
Satd. Flow (perm)	0	1577	0	0	1534	0	0	1650	0	0	1597	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	22	16	0	11	15	16	87	0	22	71	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	26	0	0	103	0	0	121	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			



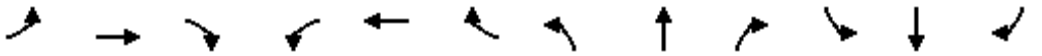
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	3	1	1	16	1	80	1	24	59	3
Future Volume (vph)	7	0	3	1	1	16	1	80	1	24	59	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.959			0.880			0.998			0.995	
Flt Protected		0.966			0.997			0.999			0.986	
Satd. Flow (prot)	0	1446	0	0	1370	0	0	1557	0	0	1532	0
Flt Permitted		0.966			0.997			0.999			0.986	
Satd. Flow (perm)	0	1446	0	0	1370	0	0	1557	0	0	1532	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	7	0	3	1	1	16	1	80	1	24	59	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	18	0	0	82	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.8%		ICU Level of Service A	
Analysis Period (min) 15			

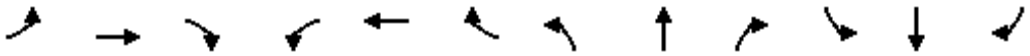


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	81	13	0	0	29	34
Future Volume (vph)	81	13	0	0	29	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.981				0.927	
Flt Protected	0.959					
Satd. Flow (prot)	1551	0	0	1648	1528	0
Flt Permitted	0.959					
Satd. Flow (perm)	1551	0	0	1648	1528	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	81	13	0	0	29	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	97	97	97			97
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.0%	ICU Level of Service	A
Analysis Period (min)	15		



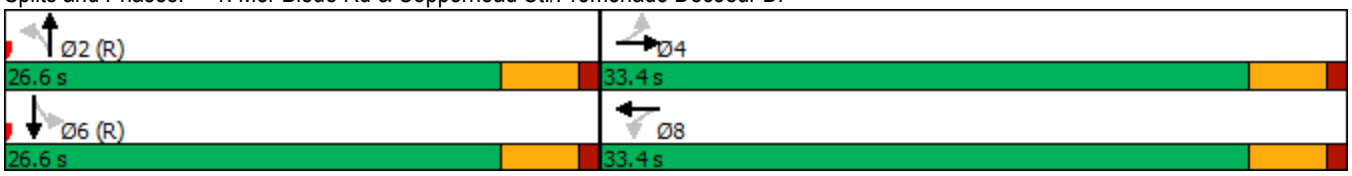
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	65	1	77	82	356	2	310	41	140	158	6
Future Volume (vph)	2	65	1	77	82	356	2	310	41	140	158	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.907			0.982			0.994	
Flt Protected		0.999			0.993		0.950			0.950		
Satd. Flow (prot)	0	1723	0	0	1556	0	1642	3224	0	1642	3264	0
Flt Permitted		0.988			0.940		0.636			0.521		
Satd. Flow (perm)	0	1704	0	0	1473	0	1099	3224	0	900	3264	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			259			27			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	72	1	86	91	396	2	344	46	156	176	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	573	0	2	390	0	156	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

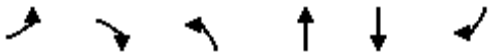


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	33.4	33.4		33.4	33.4		26.6	26.6		26.6	26.6	
Total Split (%)	55.7%	55.7%		55.7%	55.7%		44.3%	44.3%		44.3%	44.3%	
Maximum Green (s)	28.9	28.9		28.9	28.9		22.1	22.1		22.1	22.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		20.2			20.2		30.8	30.8		30.8	30.8	
Actuated g/C Ratio		0.34			0.34		0.51	0.51		0.51	0.51	
v/c Ratio		0.13			0.86		0.00	0.23		0.34	0.11	
Control Delay		11.3			22.4		11.0	9.8		14.4	9.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		11.3			22.4		11.0	9.8		14.4	9.7	
LOS		B			C		B	A		B	A	
Approach Delay		11.3			22.4			9.8			11.9	
Approach LOS		B			C			A			B	
Queue Length 50th (m)		5.4			30.3		0.1	11.0		9.7	5.0	
Queue Length 95th (m)		9.8			53.8		1.2	23.5		28.0	12.3	
Internal Link Dist (m)		445.4			369.6			127.0			574.4	
Turn Bay Length (m)							40.0			40.0		
Base Capacity (vph)		821			843		563	1667		461	1677	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.09			0.68		0.00	0.23		0.34	0.11	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

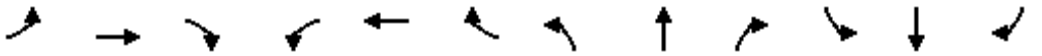
Splits and Phases: 1: Mer Bleue Rd & Copperhead St./Promenade Decoeur Dr





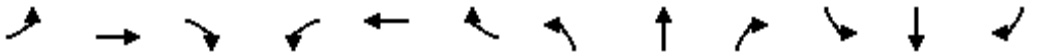
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	16	14	207	88	148
Future Volume (vph)	146	16	14	207	88	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986				0.915	
Flt Protected	0.957			0.997		
Satd. Flow (prot)	1631	0	0	1723	1581	0
Flt Permitted	0.957			0.997		
Satd. Flow (perm)	1631	0	0	1723	1581	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	162	18	16	230	98	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	0	246	262	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			



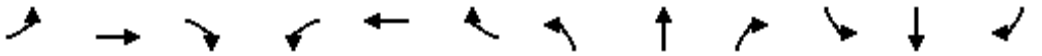
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	100	133	52	305	15	149	96	58	14	48	63
Future Volume (vph)	14	100	133	52	305	15	149	96	58	14	48	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.927			0.994			0.974			0.932	
Flt Protected		0.997			0.993			0.976			0.994	
Satd. Flow (prot)	0	1582	0	0	1689	0	0	1627	0	0	1586	0
Flt Permitted		0.997			0.993			0.976			0.994	
Satd. Flow (perm)	0	1582	0	0	1689	0	0	1627	0	0	1586	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	16	111	148	58	339	17	166	107	64	16	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	275	0	0	414	0	0	337	0	0	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			



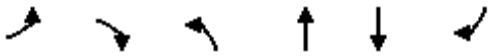
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	9	10	0	21	25	21	250	0	10	170	52
Future Volume (vph)	28	9	10	0	21	25	21	250	0	10	170	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.926						0.970	
Flt Protected		0.971						0.996			0.998	
Satd. Flow (prot)	0	1568	0	0	1540	0	0	1657	0	0	1610	0
Flt Permitted		0.971						0.996			0.998	
Satd. Flow (perm)	0	1568	0	0	1540	0	0	1657	0	0	1610	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	10	11	0	23	28	23	278	0	11	189	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	51	0	0	301	0	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			



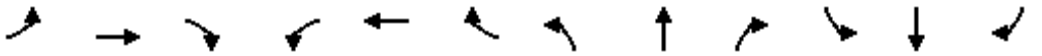
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	2	0	1	23	1	240	1	12	167	1
Future Volume (vph)	8	0	2	0	1	23	1	240	1	12	167	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.870			0.999			0.999	
Flt Protected		0.961									0.997	
Satd. Flow (prot)	0	1463	0	0	1358	0	0	1560	0	0	1555	0
Flt Permitted		0.961									0.997	
Satd. Flow (perm)	0	1463	0	0	1358	0	0	1560	0	0	1555	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	9	0	2	0	1	26	1	267	1	13	186	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	27	0	0	269	0	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

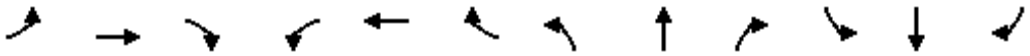


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	242	38	45	0	34	134
Future Volume (vph)	242	38	45	0	34	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.982				0.892	
Flt Protected	0.959			0.950		
Satd. Flow (prot)	1552	0	0	1566	1470	0
Flt Permitted	0.959			0.950		
Satd. Flow (perm)	1552	0	0	1566	1470	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	269	42	50	0	38	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	0	50	187	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.5%		ICU Level of Service A	
Analysis Period (min) 15			



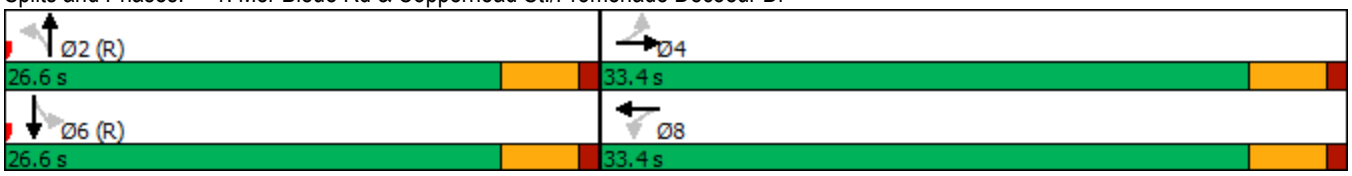
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	65	1	77	82	356	2	310	41	140	158	6
Future Volume (vph)	2	65	1	77	82	356	2	310	41	140	158	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	40.0		0.0	40.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.998			0.907			0.982			0.994	
Flt Protected		0.999			0.993		0.950			0.950		
Satd. Flow (prot)	0	1723	0	0	1556	0	1642	3224	0	1642	3264	0
Flt Permitted		0.988			0.940		0.636			0.521		
Satd. Flow (perm)	0	1704	0	0	1473	0	1099	3224	0	900	3264	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			259			27			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		469.4			393.6			151.0			598.4	
Travel Time (s)		33.8			28.3			10.9			43.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	72	1	86	91	396	2	344	46	156	176	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	573	0	2	390	0	156	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		6.1	10.0		2.0	30.5		6.1	30.5	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

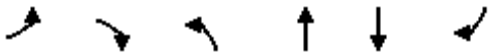


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	33.4	33.4		33.4	33.4		26.6	26.6		26.6	26.6	
Total Split (%)	55.7%	55.7%		55.7%	55.7%		44.3%	44.3%		44.3%	44.3%	
Maximum Green (s)	28.9	28.9		28.9	28.9		22.1	22.1		22.1	22.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		20.2			20.2		30.8	30.8		30.8	30.8	
Actuated g/C Ratio		0.34			0.34		0.51	0.51		0.51	0.51	
v/c Ratio		0.13			0.86		0.00	0.23		0.34	0.11	
Control Delay		11.3			22.4		11.0	9.8		14.4	9.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		11.3			22.4		11.0	9.8		14.4	9.7	
LOS		B			C		B	A		B	A	
Approach Delay		11.3			22.4			9.8			11.9	
Approach LOS		B			C			A			B	
Queue Length 50th (m)		5.4			30.3		0.1	11.0		9.7	5.0	
Queue Length 95th (m)		9.8			53.8		1.2	23.5		28.0	12.3	
Internal Link Dist (m)		445.4			369.6			127.0			574.4	
Turn Bay Length (m)							40.0			40.0		
Base Capacity (vph)		821			843		563	1667		461	1677	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.09			0.68		0.00	0.23		0.34	0.11	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

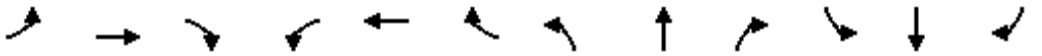
Splits and Phases: 1: Mer Bleue Rd & Copperhead St./Promenade Decoeur Dr





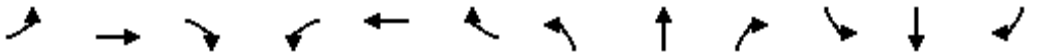
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	16	14	207	88	148
Future Volume (vph)	146	16	14	207	88	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	7.6		7.6			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986				0.915	
Flt Protected	0.957			0.997		
Satd. Flow (prot)	1631	0	0	1723	1581	0
Flt Permitted	0.957			0.997		
Satd. Flow (perm)	1631	0	0	1723	1581	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	91.3			485.1	145.2	
Travel Time (s)	6.6			34.9	10.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	162	18	16	230	98	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	0	0	246	262	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			



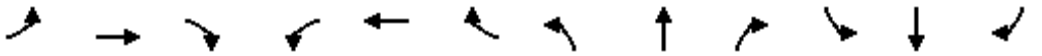
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	100	133	52	305	15	149	96	58	14	48	63
Future Volume (vph)	14	100	133	52	305	15	149	96	58	14	48	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.927			0.994			0.974			0.932	
Flt Protected		0.997			0.993			0.976			0.994	
Satd. Flow (prot)	0	1582	0	0	1689	0	0	1627	0	0	1586	0
Flt Permitted		0.997			0.993			0.976			0.994	
Satd. Flow (perm)	0	1582	0	0	1689	0	0	1627	0	0	1586	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		393.6			250.7			259.0			127.1	
Travel Time (s)		28.3			18.1			18.6			9.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	16	111	148	58	339	17	166	107	64	16	53	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	275	0	0	414	0	0	337	0	0	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			



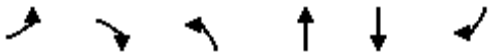
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	9	10	0	21	25	21	250	0	10	170	52
Future Volume (vph)	28	9	10	0	21	25	21	250	0	10	170	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.926						0.970	
Flt Protected		0.971						0.996			0.998	
Satd. Flow (prot)	0	1568	0	0	1540	0	0	1657	0	0	1610	0
Flt Permitted		0.971						0.996			0.998	
Satd. Flow (perm)	0	1568	0	0	1540	0	0	1657	0	0	1610	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		180.8			203.5			168.5			259.0	
Travel Time (s)		13.0			14.7			12.1			18.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	10	11	0	23	28	23	278	0	11	189	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	51	0	0	301	0	0	258	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		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)	8	0	2	0	1	23	1	240	1	12	167	1
Future Volume (vph)	8	0	2	0	1	23	1	240	1	12	167	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.870			0.999			0.999	
Flt Protected		0.961									0.997	
Satd. Flow (prot)	0	1463	0	0	1358	0	0	1560	0	0	1555	0
Flt Permitted		0.961									0.997	
Satd. Flow (perm)	0	1463	0	0	1358	0	0	1560	0	0	1555	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		110.2			183.1			79.5			168.5	
Travel Time (s)		7.9			13.2			5.7			12.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	9	0	2	0	1	26	1	267	1	13	186	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	27	0	0	269	0	0	200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	242	38	45	0	34	134
Future Volume (vph)	242	38	45	0	34	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5
Grade (%)	0%			0%	0%	
Storage Length (m)	0.0	0.0	0.0			0.0
Storage Lanes	1	0	0			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.982				0.892	
Flt Protected	0.959			0.950		
Satd. Flow (prot)	1552	0	0	1566	1470	0
Flt Permitted	0.959			0.950		
Satd. Flow (perm)	1552	0	0	1566	1470	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	99.4			52.3	79.5	
Travel Time (s)	7.2			3.8	5.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	269	42	50	0	38	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	0	50	187	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.5			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.5%		ICU Level of Service A	
Analysis Period (min) 15			

Appendix H

RMA Report Figures

LEGEND:

PROPOSED SITE DEVELOPMENT

PLANNING, REAL ESTATE AND ECONOMIC DEVELOPMENT

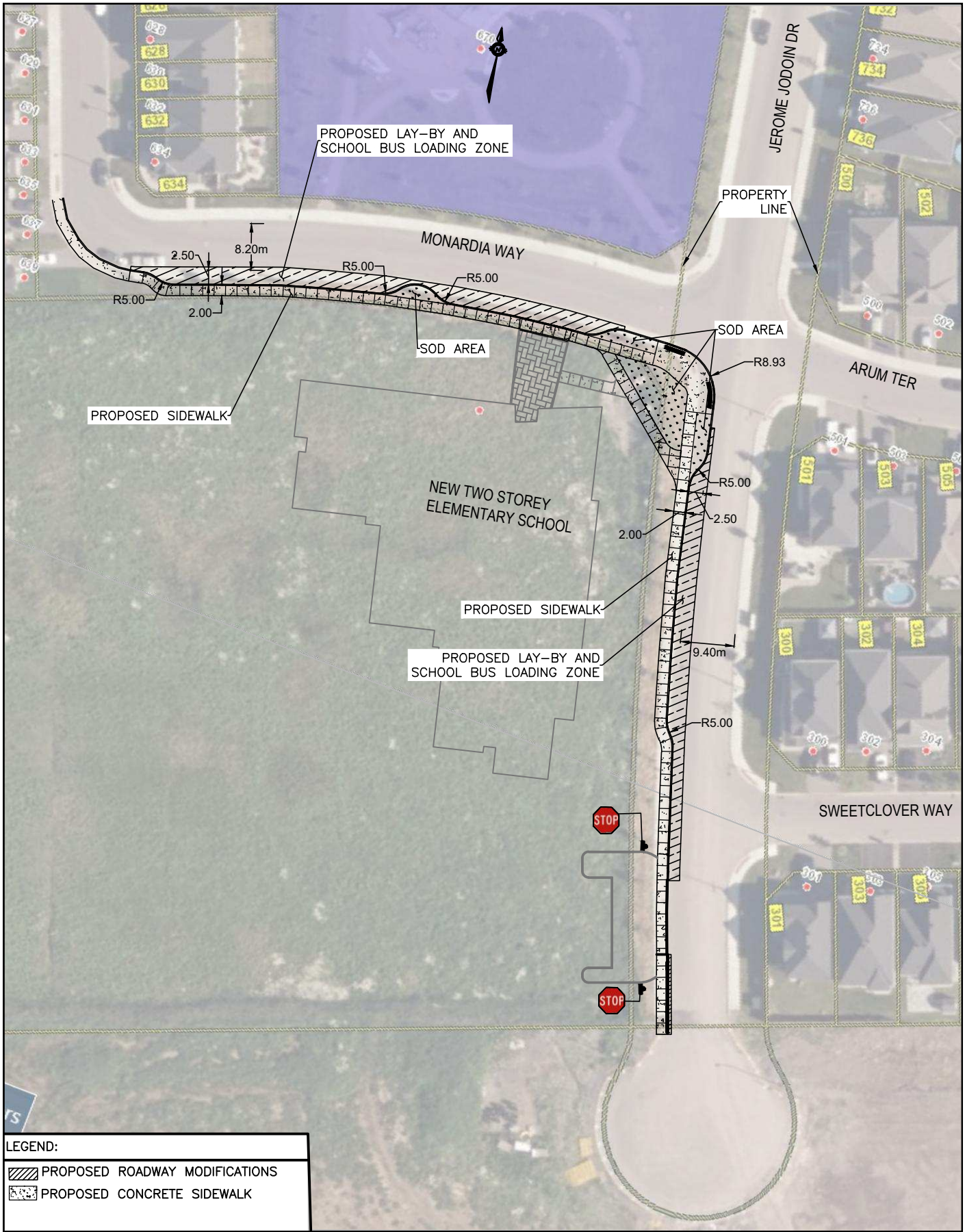
KEY PLAN

JÉROME JODOIN DRIVE AND MONARDIA WAY – 2405 MER BLEUE ROAD

RMA NUMBER: RMA–2023–TPD–068

TRANSPORTATION & ENGINEERING SERVICES

Approved By:	Drawing No.: 2023–RMA–001
Completed By.: EXP	
Scale: N.T.S	Date: NOVEMBER 2023



PLANNING, REAL ESTATE AND ECONOMIC DEVELOPMENT

PROPOSED ROADWAY MODIFICATIONS

JÉROME JODOIN DRIVE AND MONARDIA WAY – 2405 MER BLEUE ROAD

RMA NUMBER: RMA–2023–TPD–068

TRANSPORTATION & ENGINEERING SERVICES

Approved By:	Drawing No.: 2023–RMA–002
Completed By.: EXP	
Scale: N.T.S	Date: NOVEMBER 2023