



Appendix N – Juliana Drive Corridor Study





City of
Woodstock

Juliana Drive Corridor Study



**RC SPENCER
ASSOCIATES INC.**
Consulting Engineers

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1.0 Introduction and Background

The City of Woodstock has retained Egis and RC Spencer Associates Inc. to conduct a study of the Juliana Drive corridor (as part of Woodstock's new Transportation Master Plan). Woodstock is located about halfway between the two larger cities of London and Kitchener-Waterloo, on County Road 2 (Dundas Street) and Highway 401. County Road 2 is an arterial road that runs parallel to (and north of) provincial Highway 401. County Road 59 bisects the city north / south. In 2021, the population of the City of Woodstock was estimated at over 46,700, and the community continues to grow because of new area developments. The area plan is shown on **Figure 1**, and the study area is shown on **Figure 2**:



Figure 1: Area Plan

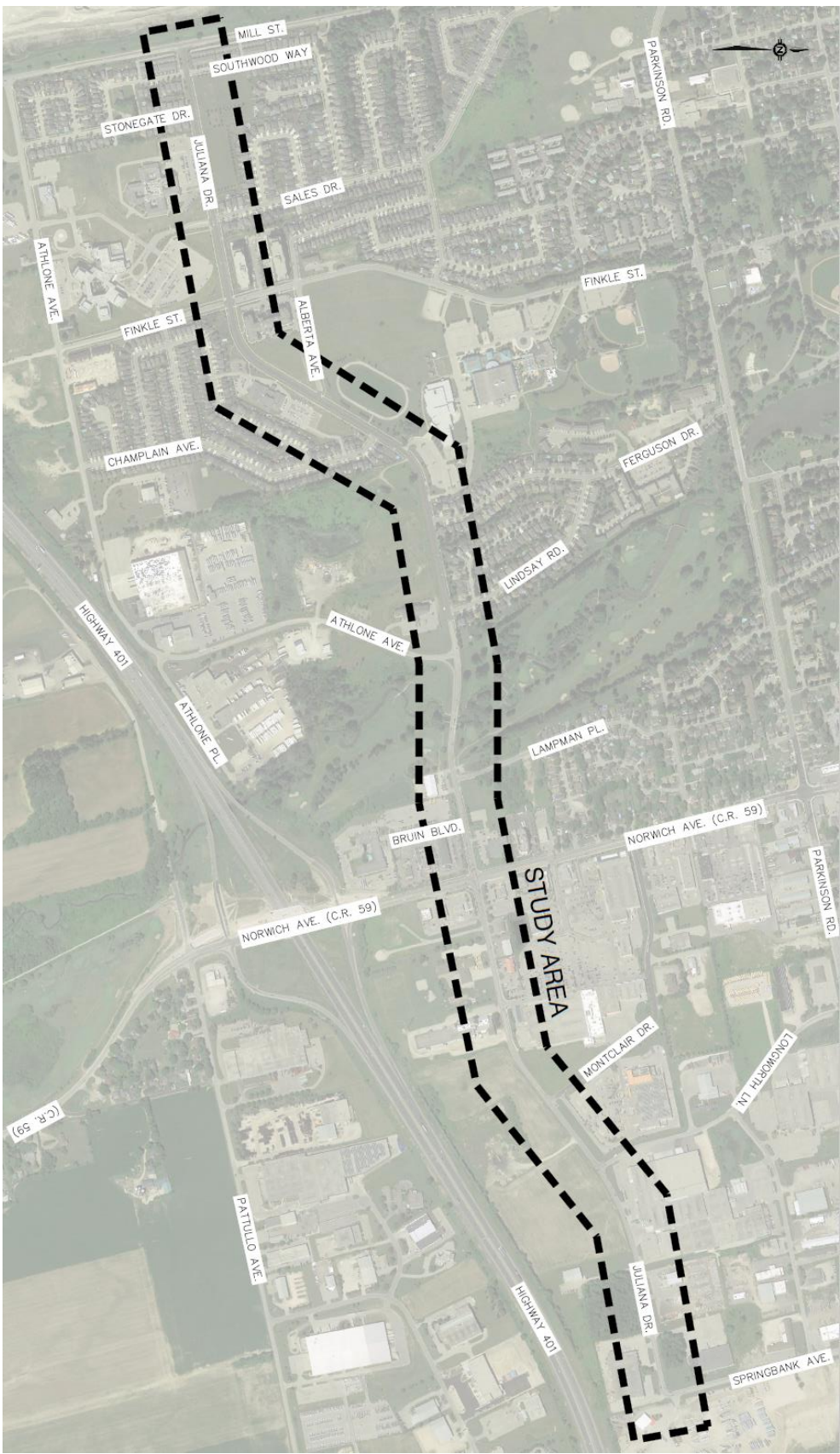


Figure 2: Study Area

The portion of Juliana Drive between Norwich Avenue and Athlone Avenue is part of the MTO's Emergency Detour Route (EDT). Additionally, the Woodstock Hospital is accessed via Juliana Drive west of Finkle Street.

In recent years, there have been several development proposals that directly impact Juliana Drive; accordingly, the City of Woodstock requested that these potential developments be evaluated in consideration of potential background growth for the area. In expectation of growth, the City recognizes that the Juliana Drive corridor may require various traffic infrastructure improvements; although this study is not an official Environmental Assessment for the Juliana Drive corridor, it is intended to proactively guide City decision-makers in sustainably evaluating their "next steps".

2.0 Existing Conditions

There are fifteen intersections within the subject 3.0 km study area; however, seven intersections were specifically identified by the City of Woodstock for evaluation. The intersections' current geometric and traffic control conditions are summarized as follows:

2.1 Mill Street at Juliana Drive

Mill Street, also known as County Road 12, is a two-lane minor arterial roadway with a dedicated southbound left turn lane and a dedicated northbound right turn lane at this location. The speed limit on Mill Street is 60 km/h. It meets Juliana Drive at a westbound stop-controlled tee intersection. Juliana Drive is a two-lane minor arterial roadway; it is comprised of an urban cross-section with a sidewalk on the south side; the speed limit on Juliana Drive is 50 km/h. Dedicated left and right turn lanes are provided on the westbound approach. A transit stop for Route 6-SW is provided on the south side of Juliana Drive approximately 90m from Mill Street.

2.2 Finkle Street at Juliana Drive

Finkle Street is a two-lane collector roadway that meets Juliana Drive at an all-way stop-controlled intersection. Finkle Street begins at Dundas Street and proceeds south to its terminus south of Athlone Avenue; however, there is a section between Main Street and Henry Street that allows pedestrian access only due to the CN Rail crossing. The speed limit on Finkle Street is 50 km/h. It is comprised of an urban cross-section, with a sidewalk provided on both sides of the road. Finkle Street is posted as a bicycle route (with bike lanes on both sides); sidewalks are provided on both sides. The speed limit on Juliana Drive is 50 km/h; no parking is permitted on Juliana Drive. Two transit stops for Route 7-SC are provided on the north side of Juliana Drive approximately 120m west and 20m east of Finkle Street; there is also a stop for Route 6-SW on the southwest corner of the subject intersection.

2.3 Athlone Avenue at Juliana Drive

Athlone Avenue is a two-lane collector roadway between Juliana Drive and Mill Street; it meets Juliana Drive at a northbound stop-controlled tee intersection. A northbound channelized right turn lane is provided. The speed limit on Athlone Avenue is 50 km/h; it is comprised of an urban cross-section, but no sidewalks are provided. Juliana Drive is a two-lane minor arterial roadway with a dedicated westbound left turn lane with a combined storage and taper length of approximately 60m, a 50 km/h speed limit and an urban cross-section; sidewalks are provided on the north side of both legs. A transit stop for Route 6-SW is on the south side of Juliana Drive approximately 90m west of Athlone Avenue.

2.4 Lampman Place at Juliana Drive

Lampman Place is a two-lane local roadway that meets Juliana Drive at a southbound stop-controlled tee intersection; the speed limit on Lampman Place is 50 km/h. It is comprised of an urban cross-section, with dedicated southbound left and right turn lanes; no sidewalks are provided. Juliana Drive is a two-lane minor arterial roadway with an urban cross-section; sidewalks are provided on the north side of both legs. The speed limit on Juliana Drive is 50 km/h. A transit stop for Route 6-SW is provided on the south side of Juliana Drive approximately 20m east of Lampman Place.

2.5 Bruin Boulevard at Juliana Drive

Bruin Boulevard is a two-lane local roadway that meets Juliana Drive at a northbound stop-controlled intersection; it is comprised of an urban cross-section with a sidewalk provided on both sides of the road. The speed limit on Bruin Boulevard is 50 km/h. Juliana Drive is a two-lane minor arterial roadway with an urban cross-section; a dedicated westbound left turn lane is provided with a combined storage and taper length of approximately 45m. Sidewalks are provided on the north side of both legs and the south side of the east leg. A transit stop for Route 6-SW is provided on the south side of Juliana Drive approximately 50m east of Bruin Boulevard.

2.6 Norwich Avenue at Juliana Drive

Norwich Avenue (County Road 59) at Juliana Drive is a signalized intersection with a dedicated left turn phase for all legs. Norwich Avenue (County Road 59) is an arterial road with a speed limit of 50 km/h. Juliana Drive is a minor arterial roadway which is posted at 50 km/h. These streets are comprised of an urban cross-section, with a sidewalk provided on both sides of all legs; parking and stopping are prohibited on all legs. Transit stops for Routes 5-SE and 6-SW are provided within 150m of the intersection in all directions.

The eastbound leg consists of a dedicated left turn lane (with 50m storage length and a 30m taper), a through lane and a right turn lane; the westbound leg consists of a dedicated double left turn lane

(with 63m storage length and a 70m taper), and a shared through / right turn lane. The northbound leg consists of a dedicated left turn lane (with 70m storage length and a 20m taper), a through lane and a shared through / right turn lane; the southbound consists of a dedicated left turn lane (with 38m storage length and a 15m taper), a through lane and a shared through / right turn lane.

2.7 Montclair Drive at Juliana Drive

Montclair Drive at Juliana Drive is a three-legged intersection with a stop control on the southbound leg; all approaches consist of shared lanes, save for the eastbound approach (which accommodates a dedicated left turn lane). Montclair Drive is a local street with an assumed speed limit of 50 km/h; this 675m long road loops around the SmartCentres Woodstock shopping mall and joins Norwich Avenue to the north. Juliana Drive is a minor arterial roadway with a speed limit of 50 km/h. There are no sidewalks provided; on-street parking is not permitted near this intersection.

3.0 Traffic Data Collection

As provided in **Appendix A**, on 11 October 2023, turning movement counts were obtained by Ontario Traffic Inc. for the intersections of:

- Mill Street (CR 12) at Juliana Drive;
- Finkle Street at Juliana Drive;
- Athlone Avenue at Juliana Drive;
- Lampman Place at Juliana Drive;
- Bruin Boulevard at Juliana Drive;
- Norwich Avenue (CR 59) at Juliana Drive; and
- Montclair Drive at Juliana Drive.

4.0 Anticipated Area Development Traffic

Within the area, there are several developments in various stages of concept, planning, or construction, and many are expected to reach full buildout within the horizon years; traffic impact studies have been prepared for some developments, so the available information was provided to RC Spencer Associates Inc. for use in evaluating the 20-year horizon traffic volumes; these development proposals are summarized in the following sections:

4.1 140 Ferguson Drive

The “140 Ferguson Drive Transportation Impact & Parking Justification Study” was prepared by Paradigm Transportation Solutions Limited in March 2018. The subject site is located on the west side of Ferguson Drive, south of Parkinson Road, north of Juliana Drive. The proposed development

includes 185 residential units and was expected to be constructed by 2021. Site access is provided via two roadway connections to Ferguson Drive. This subdivision will generate approximately 121 trips in the AM peak hour and 70 trips in the PM peak hour, with approximately 35% to 40% of the traffic utilizing Juliana Drive. The site plan has been approved, and the development is under construction.

4.2 200 Montclair Drive

The “Proposed Commercial Development” TIS was prepared by Nextrans Consulting Engineers in December 2019. The subject site is located on vacant lands at the northwest corner of Montclair Drive at Juliana Drive. The proposed development will include a fast-food restaurant with drive-through, a walk-in bank, and shopping centre. Two site accesses are proposed onto Montclair Drive. This development will generate approximately 222 trips during the PM peak hour; the AM peak hour was not evaluated. Approximately 35% to 40% of the traffic is projected to utilize Juliana Drive. It was last noted that the site plan has been approved.

4.3 300 Juliana Drive

The “Proposed Residential Development” TIS was prepared by Green Light in April 2019. The site is located on vacant lands south of Juliana Drive. The proposed development will include apartments, rental townhomes, and single-family detached / semi-detached homes; it will generate approximately 116 trips during the AM peak hour and approximately 139 trips during the PM peak hour. A primary access will be to Juliana Drive; therefore, it is assumed that a large portion of the traffic will utilize Juliana Drive. It was last noted that the site plan has been approved.

4.4 335 Juliana Drive

The “Juliana Drive Apartments” TIS was prepared by HDDR Corporation in April 2022 and updated in January 2024. The subject site is located on vacant lands north of Juliana Drive at Alberta Avenue. The proposed development will include 210 apartments. This development will generate approximately 65 trips during the AM peak hour and approximately 78 trips during the PM peak hour. Main access is to be onto Alberta Avenue; however, most of the traffic is projected to utilize Juliana Drive. It was last noted that the zoning has been approved; however, the site plan has not been finalized.

4.5 499 and 527 Lampman Place

The “Proposed Hotel and Conference Centre” TIS was prepared by Trans Plan Transportation Engineering in September 2019. The subject site is located on vacant lands on the northeast corner of Lampman Place at Juliana Drive. This development will generate approximately 115 trips during the AM peak hour and approximately 134 trips during the PM peak hour. Primary access will be to and from Juliana Drive via Lampman Place; therefore, it is assumed that a large portion of the traffic will

utilize Juliana Drive. It was last noted that the site plan has been approved and the development was under construction.

4.6 555 Mill Street

The “Proposed Mixed-Use Phased Development” TIS was prepared by Trans Plan Transportation Engineering in March 2023. The subject site is located on Mill Street across from Clarke Road. This development which consists of two quick service restaurants with drive-through, gas station and convenience store, automatic car wash and 5-storey, 94-room hotel, will generate approximately 237 trips during the AM peak hour and approximately 285 trips during the PM peak hour. The site is just north of the Highway 401 interchange; therefore, it is assumed that a small portion of the traffic will utilize Juliana Drive, perhaps up to 11%. It was last noted that site plan approval is pending.

4.7 580 Bruin Boulevard

A conceptual site plan was provided by the City of Woodstock for a residential / hotel development. Primary access will be to and from Juliana Drive via Bruin Boulevard; therefore, it is assumed that all traffic will utilize Juliana Drive. This development proposal is currently “in process”, but there is no accepted estimate of the trips generated by the subject proposal.

4.8 670 Finkle Street

The “Finkle Street and Athlone Avenue Transportation Impact Study” was prepared by Paradigm Transportation Solutions Limited in October 2022. The subject site is located at the end of Finkle Street, south of Athlone Avenue, north of Highway 401. This industrial development will generate approximately 167 trips in the AM peak hour and 147 trips in the PM peak hour with approximately a third of the traffic heading north via Finkle Street or Mill Street; some of these trips may utilize Juliana Drive. It was last noted that the site plan has been approved.

4.9 760 Juliana Drive

The “Proposed Re-Zoning of High-Density Residential Development” TIS was prepared by Trans Plan Transportation Engineering in April 2021. The subject site is located on the south side of Juliana Drive, across from Lampman Place. This development which consists of two high-rise residential buildings, will generate approximately 108 trips during the AM peak hour and approximately 124 trips during the PM peak hour. All site generated traffic is expected to utilize a new four-way intersection at Lampman Place. This is a City of Woodstock project where the City is seeking a zoning change.

4.10 763 Athlone Avenue

The “Athlone Hills” TIS was prepared by RC Spencer Associates in December 2019. The subject site is located at the southeast corner of Athlone Avenue at Juliana Drive. This mixed-use development which consists of multiple mid-rise residential buildings, a hotel, and medical and general office space, will generate approximately 400 trips during the AM peak hour and approximately 485 trips during the PM peak hour. The site will access both Juliana Drive and Athlone Avenue; therefore, it is assumed that a large portion of the traffic will utilize Juliana Drive. It was last noted that the draft plan of subdivision has been approved.

4.11 769 Juliana Drive

There are no existing applications for this site; however, the City of Woodstock notes that this land could be used for high density residential development.

4.12 Hermina / Calloway / Starbank / Berkshire Developments

The reports for these developments were provided by the City of Woodstock and are dated between 2007 and 2009. These various developments are in various stages of development. Some are fully developed; others are still vacant. There are currently no additional specifics for these properties.

4.13 Cedar Creek Residential Development

The “Cedar Creek, City of Woodstock, Residential Development” TIS was prepared by BA Group in November 2022. The subject site is located on the northwest corner of Juliana Drive at Lampman Place. This development which consists of a 10-storey residential building with 125 residential units, will generate approximately 45 trips during the AM peak hour and approximately 55 trips during the PM peak hour. Most site generated traffic would be utilizing the intersection of Juliana Drive at Lampman Place. Zoning has been approved, but there is no site plan yet.

4.14 Summary of Developments

If all area developments are compiled, the projected AM peak hour total is approximately 1374 trips, and the projected PM peak hour total is approximately 1739 trips; there are also some developments that are not yet finalized, so the estimates are not available. As noted in the descriptions of each development, not all sites are directly adjacent to Juliana Drive, and the site generated traffic from many of these sites will be diluted via other area roadways.

Currently, during the AM peak hour, there are more than 800 eastbound / westbound trips at the signalized intersection of Norwich Avenue at Juliana Drive intersection; during the PM peak hour,

there approximately 1,250 eastbound / westbound trips at this intersection. When the current volumes are grown at 3% per year, compounded annually for 20 years, the volumes are increased by approximately 80%, placing an additional 640 vehicles on-street in the AM peak hour, and an additional 1,000 vehicles on-street in the PM peak hour.

Figure 3 depicts the locations of each of these developments in relation to Juliana Drive (as numbered in the prior development descriptions):

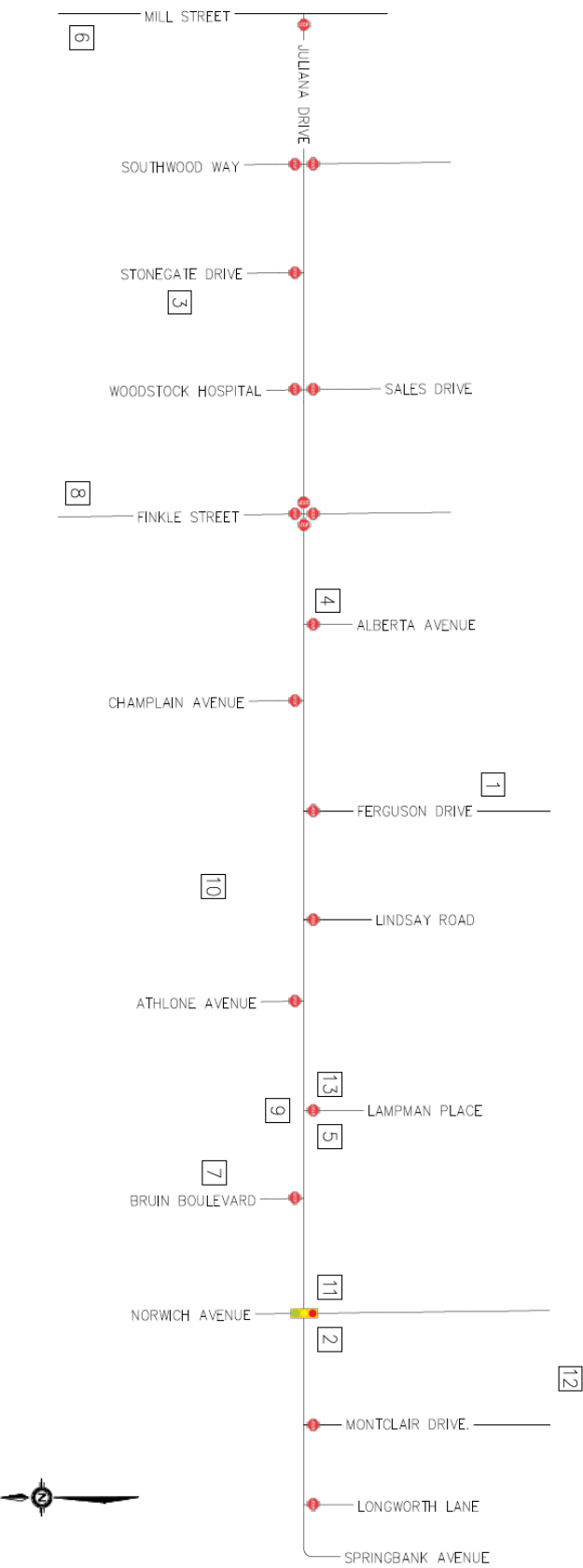


Figure 3: Anticipated Area Developments

The traffic generated by these above-noted development sites is not individually considered in the Total Traffic 2043 volumes; instead, as agreed upon with the City of Woodstock, a 3% growth rate was applied to all movements along the corridor. When compounded annually, a 3% growth rate translates to an 80.6% increase in overall traffic volumes by the 20-year horizon.

5.0 Methodology

The collected turning movement counts provided the basis for industry-standard traffic operations analysis; the software package utilized for the analysis (Synchro 11) calculates various parameters of intersection performance, such as level of service (LOS), intersection capacity utilization (ICU), control delay, and queue lengths. The software references the Highway Capacity Manual (6th Edition).

Signalized level of service results are based on the following:

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Unsignalized level of service results are based on the following:

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

6.0 Capacity and Level of Service Analysis

Detailed Synchro 11 analysis was carried out with respect to the following traffic scenarios:

- Existing Traffic Volumes;
- Total Traffic 2043 (Background Traffic 2043 including Anticipated Area Development Traffic)

Figure 4 depicts the existing traffic volumes, while **Figure 5** summarizes total background traffic estimates for the 2043 horizon year:

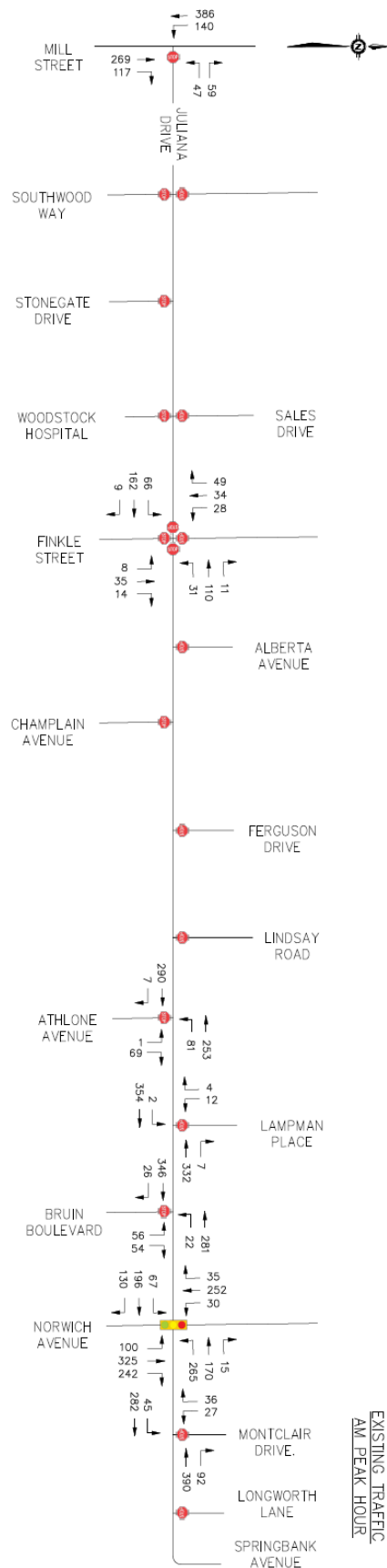
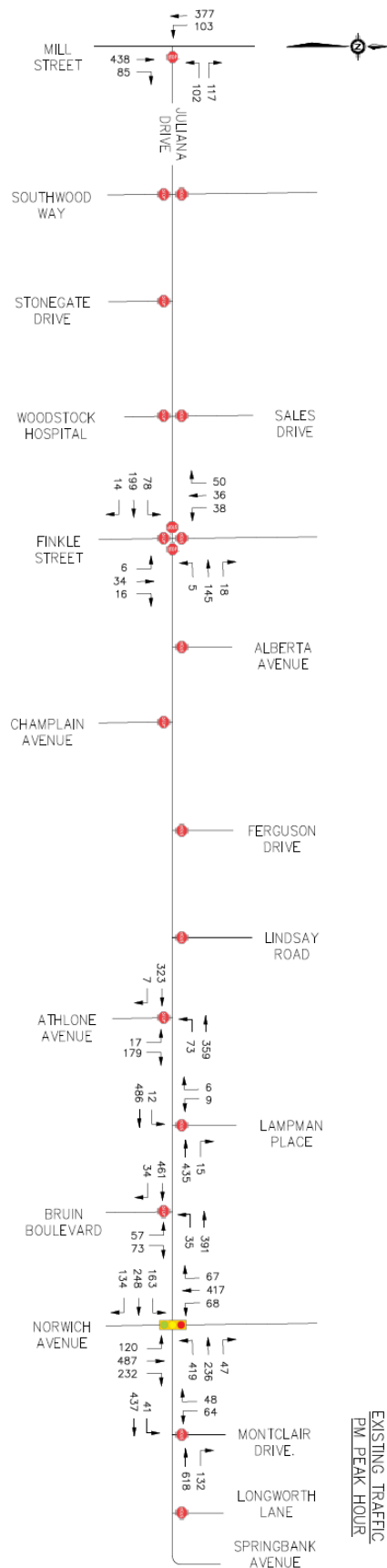


Figure 4: Existing Traffic (Weekday AM / PM Peak Hour)

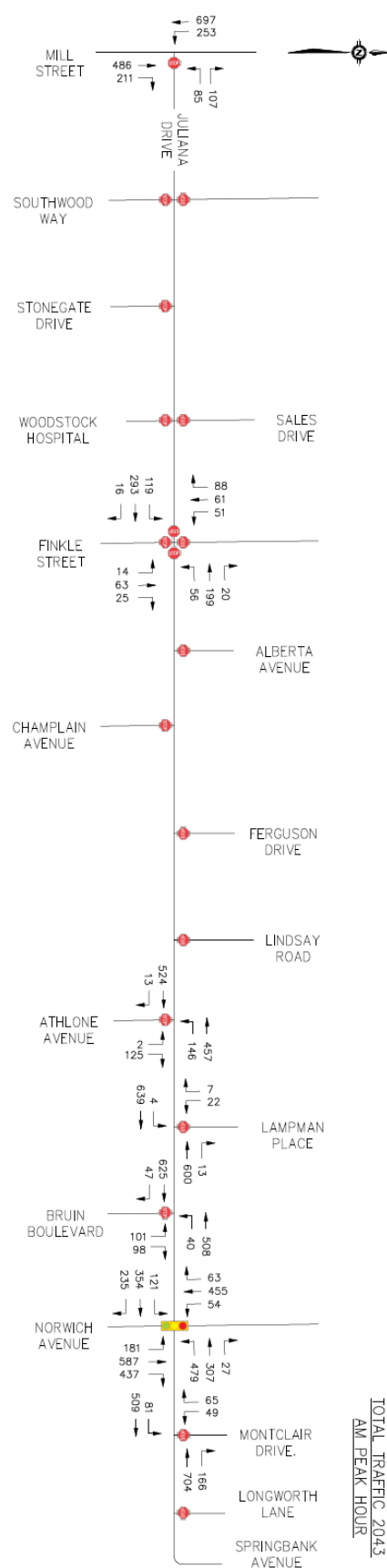
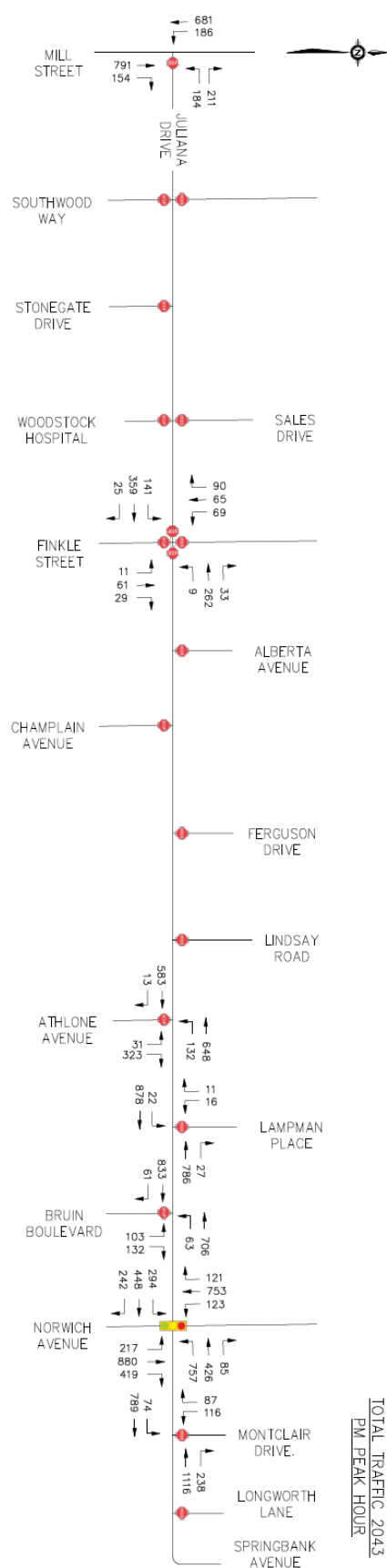


Figure 5: Total Traffic 2043 (Weekday AM / PM Peak

6.1 Mill Street at Juliana Drive

The existing tee intersection of Mill Street at Juliana Drive is under the jurisdiction of Oxford County and is controlled by a westbound stop condition, with a dedicated right turn lane and a through lane on the northbound approach, as well as a dedicated left turn lane and a through lane on the southbound approach; the westbound approach has dedicated left and right turn lanes. As observed in **Table 1**, under existing traffic volumes, all approaches operate at a satisfactory level of service. The minor street approach lane is expected to operate at a LOS D with a queue of up to 3.3 vehicles in the PM peak hour. By the 2043 horizon year, under current geometric / traffic control conditions, the westbound approach deteriorates to a LOS F, with a potential 95th percentile queue of up to 23 vehicles during the PM peak hour.

Table 1: Level of Service by Approach – Mill Street at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	-	C	A	A	-	D	A	A
Total Traffic 2043	-	F	A	A	-	F	A	A

6.2 Finkle Street at Juliana Drive

The existing intersection of Finkle Street at Juliana Drive is controlled by an all-way stop condition, with shared lanes on all approaches. As observed in **Table 2**, under existing traffic volumes, all approaches operate at a good level of service. By the 2043 horizon PM peak hour scenario, due to increased traffic volumes, the eastbound approach slips to LOS E, with a queue of up to 12 vehicles.

Table 2: Level of Service by Approach – Finkle Street at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	A	A	B	A	A	A
Total Traffic 2043	C	B	B	B	E	C	B	C

6.3 Athlone Avenue at Juliana Drive

The existing tee intersection of Athlone Avenue at Juliana Drive is controlled by a northbound stop condition, with a shared lane on the eastbound approach, a left turn lane and a through lane on the westbound approach, and a left turn lane and channelized right turn lane (with an acceleration lane) on the northbound approach. As observed in **Table 3**, under existing traffic volumes, all approaches operate at a good level of service. By the 2043 horizon PM peak hour scenario, due to increased traffic volumes and fewer gaps on Juliana Drive, the northbound left turn approach slips to LOS E with a potential queue of up to 7 vehicles.

Table 3: Level of Service by Approach – Athlone Avenue at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	B	-	A	A	B	-
Total Traffic 2043	A	A	C	-	A	A	E	-

6.4 Lampman Place at Juliana Drive

The existing tee intersection of Lampman Place at Juliana Drive is controlled by a southbound stop condition, with shared lanes on the eastbound and westbound approaches, and dedicated left and right turn lanes on the southbound approach. As observed in **Table 4**, under existing traffic volumes, all approaches operate at a satisfactory level of service. By the 2043 horizon PM peak hour scenario, the southbound approach slips to LOS E; however, the queue is expected to be less than one vehicle.

Table 4: Level of Service by Approach – Lampman Place at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	-	B	A	A	-	C
Total Traffic 2043	A	A	-	D	A	A	-	E

6.5 Bruin Boulevard at Juliana Drive

The existing tee intersection of Bruin Boulevard at Juliana Drive is controlled by a northbound stop condition, with shared lanes on the eastbound and northbound approaches, and a dedicated left turn lane and a through lane on the westbound approach. As observed in **Table 5**, under existing traffic volumes, all approaches operate at a satisfactory level of service. By the 2043 horizon PM peak hour scenario, due to increased traffic volumes, the northbound approach slips to LOS F (with a potential queue of up to 21 vehicles and a substantial control delay).

Table 5: Level of Service by Approach – Bruin Boulevard at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	C	-	A	A	C	-
Total Traffic 2043	A	A	F	-	A	A	F	-

6.6 Norwich Avenue at Juliana Drive

The Oxford County intersection of Norwich Avenue at Juliana Drive is signalized. The eastbound leg consists of dedicated left, through, and right turn lanes; the westbound leg consists of a dedicated double left turn lane and a shared through / right turn lane. The northbound leg consists of a dedicated left turn lane, a through lane, and a shared through / right turn lane; the southbound leg consists of a dedicated left turn lane, a through lane and a shared through / right turn lane. As reported in **Tables 6 and 7**, the intersection of Norwich Avenue at Juliana Drive is currently operating at a satisfactory level of service. By the 2043 horizon PM peak hour scenario, due to increased traffic volumes, the overall intersection level of service slips to LOS F (with substantial queue lengths on all approaches). If left unmanaged, the 95th percentile queue length for the eastbound through movement is projected to reach 235m, which would extend past the intersections of Bruin Boulevard and Lampman Place.

Table 6: Overall Signalized Level of Service by Approach – Norwich Avenue at Juliana Drive

Scenario	AM Peak Hour	PM Peak Hour
Existing Traffic	C	D
Total Traffic 2043	E	F

Table 7: Level of Service by Approach – Norwich Avenue at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	D	D	B	C	E	D	C	C
Total Traffic 2043	F	E	D	C	F	F	F	E

6.7 Montclair Drive at Juliana Drive

The existing tee intersection of Montclair Drive at Juliana Drive is controlled by a southbound stop condition; a dedicated eastbound left turn lane was recently implemented. As observed in **Table 8**, under existing traffic volumes, all approaches operate at a satisfactory level of service, except for the southbound approach (which exhibits a LOS E in the PM peak hour, a control delay of up to 39 seconds, and a queue of up to 3 vehicles). These metrics worsen to LOS F in the 2043 horizon scenarios. Consideration was given to the implementation of (dedicated) southbound left and right turn lanes; however, the use of adjacent dedicated turning lanes is generally discouraged due to potential sightline conflicts that are created by adjacently queued vehicles. Side-by-side vehicles can block visibility for good decision-making, which can introduce a safety issue that adversely impacts traffic operations. The trade-off between traffic safety and traffic operations is non-ideal; therefore, best practices suggest that this “geometric improvement” should not be implemented without due consideration. From the TAC Geometric Design Guide for Canadian Roads (2017), page 136, “It is undesirable to have a two-lane entry from the minor roadway to the major roadway with stop control, except at certain low-speed urban locations.”

Table 8: Level of Service by Approach – Montclair Drive at Juliana Drive

Scenario	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	-	C	A	A	-	E
Total Traffic 2043	A	A	-	F	A	A	-	F

7.0 Signal Warrant Analysis

Signal warrants were completed at six intersections within the study area, namely:

- Mill Street (CR12) at Juliana Drive;
- Finkle Street at Juliana Drive;
- Athlone Avenue at Juliana Drive;
- Lampman Place at Juliana Drive;
- Bruin Boulevard at Juliana Drive;
- Montclair Drive at Juliana Drive.

The detailed signal warrant analysis results are presented in **Appendix D**. None of the intersections meet the provincial warrants for signalization (under existing or 20-year horizon traffic conditions).

8.0 Left Turn Lane Warrants

Eastbound and / or westbound left turn lanes currently exist at Juliana Drive's intersections with Mill Street, Athlone Avenue, Bruin Boulevard, Norwich Avenue, and Montclair Drive. Finkle Street and Lampman Place are without eastbound and / or westbound left turn lanes along Juliana Drive, so left turn lane warrants were examined at these intersections (for existing and horizon scenarios). The provincial warrant references are provided in **Appendix E**. The speed limit on Juliana Drive is 50 km/h; therefore, the design speed of 60 km/h was chosen to evaluate each scenario. For the eastbound approach to the intersection of Finkle Street at Juliana Drive, based on the estimated turning movements in each scenario, eastbound left turns in all scenarios are expected to be between 26.8% and 27.8% of the eastbound approach volume; therefore, the evaluation referenced the guidelines for 25% left turns.

Although the on-street traffic volumes fall below the MTO minimum requirement for implementation of a left turn lane in the existing traffic scenarios, the future on-street volumes (along with the percentage of anticipated left turns in the future scenarios) do warrant a dedicated eastbound left turn lane with a storage length of 15m (plus taper).

Furthermore, based on the estimated turning movements in each scenario, westbound left turns are expected to be approximately 3.0% of the westbound approach volume in the AM peak hour and 20.4% of the westbound approach volume in the PM peak hour; therefore, the evaluation referenced the guidelines for 20% left turns. The projected volumes of left turns do not warrant a dedicated westbound left turn lane during the PM peak hour since they fall below the MTO's 5% left turn volume minimum requirement; however, the projected future on-street traffic volumes during the PM peak hour come close to the requirement for a 15m westbound left turn lane (plus taper) to be warranted to accommodate the 2043 traffic volumes. Since an eastbound left turn lane is required, it would be prudent to implement a dedicated left turn lane on both approaches.

At the intersection of Lampman Place at Juliana Drive, based on the estimated turning movements in each scenario, eastbound left turns in all scenarios are expected to be less than 2.5% of the eastbound approach volume; therefore, the evaluation referenced the guidelines for 5% left turns. However, the projected volumes of left turns do not warrant a dedicated eastbound left turn lane because they fall below the MTO's 5% requirement for implementation of a left turn lane. Since the horizon on-street traffic volumes meet the MTO minimum requirements, it would be prudent to consider implementation of an eastbound left turn lane with a minimum of 25m storage (plus taper) to accommodate both the minimal eastbound left turns and the creation of gaps for southbound left turns from Lampman Place.

In summary, by horizon year 2043, Juliana Drive left turn lanes should be implemented as follows:

- Finkle Street at Juliana Drive (eastbound) – 15m;
- Finkle Street at Juliana Drive (westbound) – 15m.

Though the percentage of left turns in the advancing volumes fall below the MTO's required 5% minimum threshold in many of the scenarios, the on-street traffic volumes are expected to increase with the addition of area development traffic and background traffic growth. If this is the case, minor street left turning vehicles will experience increasingly fewer gaps, resulting in longer queues. The nine other intersections within the study area (not chosen for evaluation) should not require dedicated eastbound / westbound left turn lanes; however, with the expected increase in on-street traffic volumes, vehicles attempting to exit or enter the traffic stream at these locations will also experience very fewer gaps (which will result in longer queues developing on the side streets).

9.0 Oxford County Transportation Master Plan

Oxford County has recently updated its Transportation Master Plan. Within the plan are projects earmarked for improvements over the next 1 to 5 years (2024 – 2028), 6 to 10 years (2029 – 2033) and 11+ years (2034+). The following project may influence the Juliana Drive Corridor in Woodstock:

- Oxford Road 12 (Mill Street) at Juliana Drive is scheduled for intersection improvements within the 6-to-10-year range (INT.13); roundabout control is recommended for this location.

10.0 Geometric and Traffic Control Improvements

Based on the anticipated area development traffic volumes (and in consideration of the undertaken geometric and traffic control analyses), it is the engineers' opinion that the road authority should consider some geometric and traffic control improvements to mitigate the anticipated increase to traffic volumes utilizing Juliana Drive. Generally, a three-lane cross-section (one lane in each direction with two-way left turn lane) is sufficient for roadways with an average annual daily traffic (AADT) that falls below 20,000 vehicles per day; the application is dependent on roadway volumes and other operational factors. Key criteria include:

- *Annual Average Daily Traffic (AADT) is less than 20,000 motor vehicles per day;*
- *Peak Hour / Direction Traffic is at or below 750 motor vehicles / hour;*
- *Turning Volumes and Patterns;*
- *Impacts to Transit;*
- *Impacts to Goods Movement.*

From the turning movement counts, the existing traffic volumes are just below the upper threshold. Therefore, a continuous three-lane cross-section was explored as a potential short-term improvement to the corridor. The existing and proposed typical cross-sections are depicted on **Figure 6**.

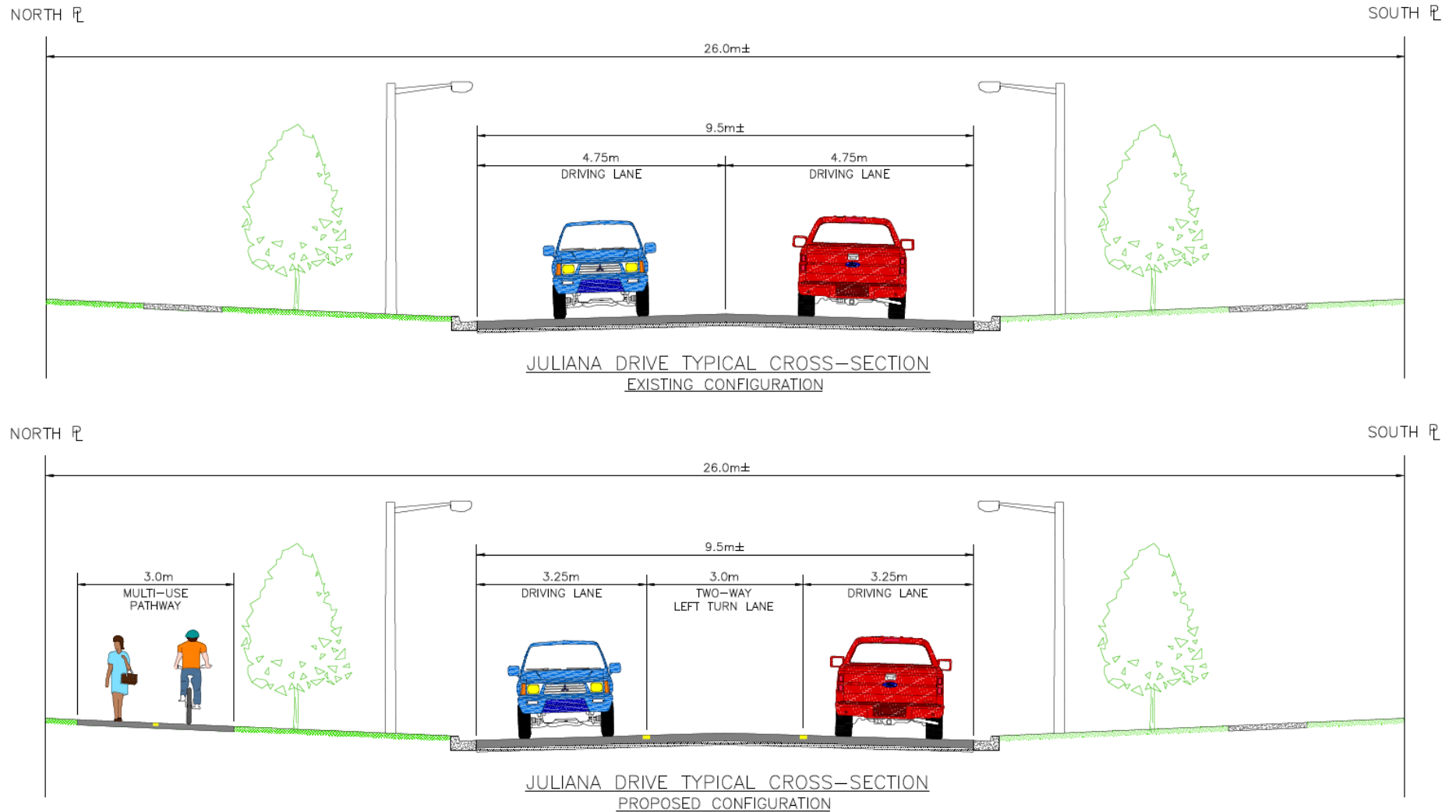


Figure 6: Typical Juliana Drive Cross-Sections

By the 2043 horizon year, eastbound and westbound left turn lanes are warranted at Finkle Street, in addition to the current left turn lanes at Mill Street, Athlone Avenue, Bruin Boulevard, Norwich Avenue, and Montclair Drive; therefore, it is the engineers' opinion that a two-way left turn lane could be implemented along the entire length of Juliana Drive, from Mill Street at the west to Springbank Avenue at the east. Since Juliana Drive is approximately 9.5m in width through this section of roadway, it is the engineers' opinion that the proposed reconfiguration could be accomplished through simple line painting and signage / by-law amendments. However, it must be noted that the City has done a good job of access management throughout the corridor, so a two-way-left-turn-lane treatment is of no benefit for a few stretches of roadway; therefore, the City is encouraged to review each road segment along Juliana Drive prior to implementing unidirectional (dedicated) or two-way left turn lanes. Signage and bylaws should supplement and regulate the applied line painting; a Professional Traffic Operations Engineer should be engaged to prepare a painting / signage plan that complies with best practices (as outlined in the Ontario Traffic Manual).

Additional Synchro 11 reports, found in **Appendix F**, were generated to evaluate the potential benefit of implementing the recommended traffic control and geometric improvements. **Table 9** identifies the levels of service that can be expected in the 2043 horizon peak hours. The failing results (denoted with a star*) indicate that the average control delay at these intersections will exceed 50 seconds during the respective peak hours.

As previously indicated, the volumes do not meet the provincial justifications for traffic signal implementation, so traffic signal control is not recommended within the study area; however, the road authority is not beholden to the provincial signal warrants. At its discretion, the respective road authority may consider other factors (delay, safety, active transportation connectivity, etc.) to justify its implementation of higher-order traffic control devices.

Table 9: Level of Service by Approach – Total Traffic 2043 Peak Hours (Proposed Imp.)

Scenario	AM Peak Hour			
	E/B	W/B	N/B	S/B
Mill Street at Juliana Drive	-	F*	A	A
Finkle Street at Juliana Drive	C	B	B	B
Athlone Avenue at Juliana Drive	A	A	C	-
Lampman Place at Juliana Drive	A	A	-	C
Bruin Boulevard at Juliana Drive	A	A	D	-
Norwich Avenue at Juliana Drive	F*	E	D	C
Montclair Drive at Juliana Drive	A	A	-	D
	PM Peak Hour			
	E/B	W/B	N/B	S/B
Mill Street at Juliana Drive	-	F*	A	A
Finkle Street at Juliana Drive	C	C	B	B
Athlone Avenue at Juliana Drive	A	A	D	-
Lampman Place at Juliana Drive	A	A	-	C
Bruin Boulevard at Juliana Drive	A	A	F*	-
Norwich Avenue at Juliana Drive	F*	F*	F*	D
Montclair Drive at Juliana Drive	A	A	-	F*

Of note, the collected turning movement counts indicate that 58 pedestrians crossed Juliana Drive (north / south) at Finkle Street during the peak eight hours; 47 pedestrians crossed at Lampman Place, and 15 pedestrians crossed at Bruin Boulevard. Since Finkle Street is already controlled by an all-way stop, unless the public expresses concern regarding safety of passage, there is no justification for signal control at this intersection. However, at the intersection of Lampman Place at Juliana Drive, even though the existing tee intersection will never meet the provincial warrants for signalization, it is the engineers' opinion that a higher-order form of traffic control could be implemented to provide safe pedestrian passage across Juliana Drive; since the intersection is about 220m away from the existing signalized intersection of Norwich Avenue at Juliana Drive, best practices suggest that this intersection is a better candidate for implementation of a pedestrian crossing treatment than Bruin Boulevard, which is only 120m away from the nearest controlled crossing.

As opportunities arise for redevelopment of the golf clubhouse located opposite Lampman Place, it is the engineers' opinion that Bruin Boulevard should be reconfigured to align opposite Lampman Place; signalization could then be implemented and coordinated with the existing signalized intersection of Norwich Avenue at Juliana Drive. However, in the interim, it is the engineers' opinion that a pedestrian crossover (PXO) is an appropriate treatment for facilitating safe pedestrian passage across Juliana Drive (within this segment of roadway); a "Level 2, Type B" PXO will likely suffice in accommodating pedestrian traffic within the 20-year horizon, but a Professional Traffic Operations Engineer should be engaged to prepare a supplementary report and detailed pedestrian crossing treatment design (in accordance with current best practices, as outlined in the Ontario Traffic Manual – Book 15).

11.0 Active Transportation Considerations

In addition to the potential pedestrian crossing treatments, active transportation facilities were also explored for the subject Juliana Drive corridor. From Mill Street to the existing Walmart® site access on Juliana Drive, sidewalks are currently provided on both sides of the Juliana Drive corridor, except for a "missing link" on the south side of the roadway (from the westerly St. Mary's Catholic High School site access to Lampman Place); from the Walmart easterly (about 840m), no sidewalk is provided on either side of Juliana Drive. The City of Woodstock should bridge the "missing links" in their sidewalk network by continuing to build out sidewalks on both sides of Juliana Drive (or by providing pedestrian crossing treatments at junctions where pedestrians are expected to cross).

Cycling facilities are currently non-existent within the Juliana Drive corridor. However, it is observed that the Juliana Drive right-of-way is large enough to accommodate an in-boulevard multi-use pathway. A few conflicting infrastructure elements may make the implementation challenging in some locations, but most of the corridor provides large and unoccupied boulevards for implementation of a 3.0m-wide in-boulevard multi-use pathway.

12.0 Summary and Conclusions

Upon review of the Juliana Drive corridor, it is concluded that:

- The City has successfully managed access throughout the corridor, so a two-way-left-turn-lane is of no benefit for a few stretches of roadway; the City should review each road segment along Juliana Drive prior to implementing unidirectional (dedicated) or two-way left turn lanes;
- Signage and bylaws should supplement and regulate the respective line painting treatments; a Professional Traffic Operations Engineer should be engaged to prepare a painting / signage plan that complies with current best practices;
- Apart from the existing signalized intersection of Norwich Avenue at Juliana Drive, no Juliana Drive intersections meet the provincial warrants for signalization (within a 20-year horizon); however, at its discretion, the road authority may consider other factors (delay, safety, active transportation connectivity, etc.) in justifying higher-order traffic control devices;
- By Horizon Year 2043, the intersection of Finkle Street at Juliana Drive could be improved via implementation of dedicated eastbound and westbound left turn lanes; the eastbound left turn storage lane should be at least 25m long (with taper), and the westbound left turn storage lane should be at least 15m long (with taper);
- On-street traffic volumes are expected to increase with the addition of area development traffic and background traffic growth; as the corridor becomes built out, minor street left turning vehicles will experience increasingly fewer gaps, resulting in longer queues;
- From the Oxford County Transportation Master Plan, Oxford County is expected to reconstruct the intersection of Oxford Road 12 (Mill Street) within a 6-to-10-year horizon; roundabout control is recommended for this location, and it is expected to significantly improve the levels of service experienced during the critical peak hours;
- At the intersection of Lampman Place at Juliana Drive, a higher-order form of traffic control could be implemented to provide safe pedestrian passage across Juliana Drive; since it is about 220m away from the existing signalized intersection of Norwich Avenue at Juliana Drive, this intersection is a better candidate for implementation of a pedestrian crossing treatment than Bruin Boulevard, which is only 120m away from the nearest controlled crossing;
- As opportunities arise for redevelopment of the lands opposite Lampman Place, Bruin Boulevard could be reconfigured to align directly opposite; signalization could then be implemented and coordinated with the existing signalized control at Norwich Avenue;

- At Lampman Place, in the interim, a pedestrian crossover (PXO) could be considered an appropriate treatment for facilitating safe pedestrian passage across Juliana Drive;
- Missing links in the sidewalk network should be bridged via continuous buildout of sidewalks on both sides of Juliana Drive (or by providing pedestrian crossing treatments at junctions where pedestrians are expected to cross);
- Cycling facilities are currently non-existent within the Juliana Drive corridor, but the Juliana Drive right-of-way is large enough to accommodate an in-boulevard multi-use pathway; a few conflicting infrastructure elements may make the implementation challenging in some locations, but most of the corridor provides large and unoccupied boulevards for implementation of a 3.0m-wide in-boulevard multi-use pathway.

Appendix A

TRAFFIC DATA COLLECTION

Mill Street (CR 12) at Juliana Drive

Finkle Street at Juliana Drive

Athlone Avenue at Juliana Drive

Lampman Place at Juliana Drive

Bruin Boulevard at Juliana Drive

Norwich Avenue (CR 59) at Juliana Drive

Montclair Drive at Juliana Drive

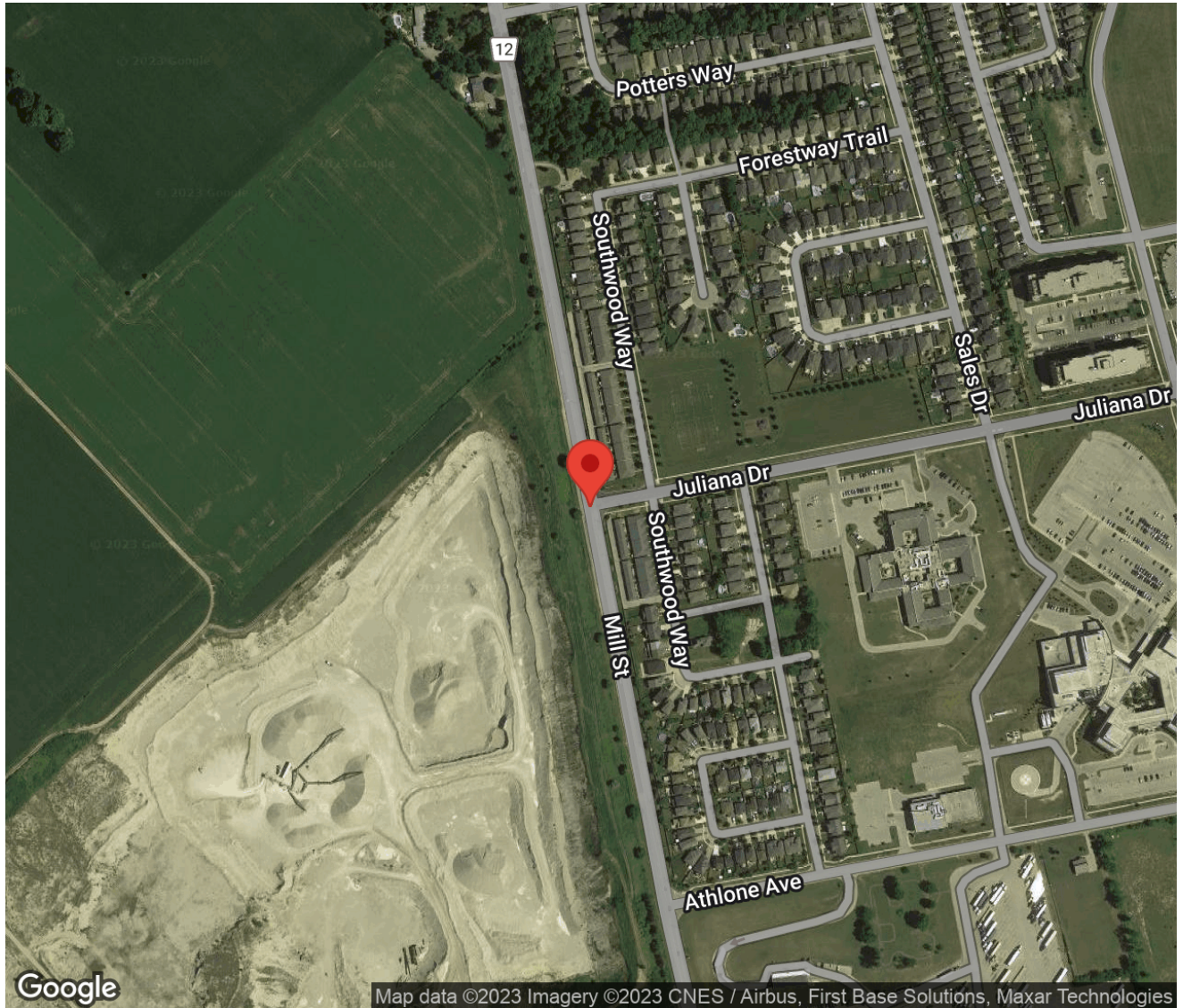
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Mill St
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800007
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Mill St
Site Code:	2332800007
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

Mill St - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	133	397	0	0	530	0	0	239	107	0	346	0	876
08:00 - 09:00	101	295	0	0	396	0	0	280	87	0	367	0	763
09:00 - 10:00	74	224	0	0	298	0	0	209	55	0	264	0	562
BREAK													
11:00 - 12:00	68	203	0	0	271	0	0	205	60	0	265	0	536
12:00 - 13:00	83	216	0	0	299	0	0	197	41	0	238	0	537
BREAK													
15:00 - 16:00	88	332	0	0	420	0	0	356	61	0	417	0	837
16:00 - 17:00	101	395	0	0	496	0	0	400	93	0	493	0	989
17:00 - 18:00	85	280	0	0	365	0	0	388	69	0	457	0	822
GRAND TOTAL	733	2342	0	0	3075	0	0	2274	573	0	2847	0	5922

Traffic Count Summary

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	46	0	57	0	103	0	0	0	0	0	0	0	103
08:00 - 09:00	40	0	65	0	105	0	0	0	0	0	0	0	105
09:00 - 10:00	39	0	41	0	80	0	0	0	0	0	0	0	80
BREAK													
11:00 - 12:00	50	0	73	0	123	0	0	0	0	0	0	0	123
12:00 - 13:00	53	0	71	0	124	0	0	0	0	0	0	0	124
BREAK													
15:00 - 16:00	60	0	104	0	164	0	0	0	0	0	0	0	164
16:00 - 17:00	96	0	110	0	206	0	0	0	0	0	0	0	206
17:00 - 18:00	70	0	97	0	167	0	0	0	0	0	0	0	167
GRAND TOTAL	454	0	618	0	1072	0	0	0	0	0	0	0	1072

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	19	87	0	0	106	2	3	0	0	5	0	0	0	0	0	0
07:15	28	106	0	0	134	2	4	0	0	6	0	0	0	0	0	0
07:30	26	92	0	0	118	1	3	0	0	4	0	0	0	0	0	0
07:45	54	94	0	0	148	1	8	0	0	9	0	0	0	0	0	0
08:00	27	74	0	0	101	1	5	0	0	6	0	0	0	0	0	0
08:15	17	68	0	0	85	2	1	0	0	3	0	0	0	0	0	0
08:30	21	62	0	0	83	3	2	0	0	5	0	0	0	0	0	0
08:45	27	74	0	0	101	3	9	0	0	12	0	0	0	0	0	0
09:00	20	59	0	0	79	3	4	0	0	7	0	0	0	0	0	0
09:15	12	60	0	0	72	2	3	0	0	5	0	0	0	0	0	0
09:30	19	46	0	0	65	1	4	0	0	5	0	0	0	0	0	0
09:45	16	47	0	0	63	1	1	0	0	2	0	0	0	0	0	0
SUBTOTAL	286	869	0	0	1155	22	47	0	0	69	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	15	56	0	0	71	1	1	0	0	2	0	0	0	0	0	0
11:15	19	45	0	0	64	1	4	0	0	5	0	0	0	0	0	0
11:30	19	45	0	0	64	1	2	0	0	3	0	0	0	0	0	0
11:45	12	45	0	0	57	0	5	0	0	5	0	0	0	0	0	0
12:00	20	54	0	0	74	1	3	0	0	4	0	0	0	0	0	0
12:15	19	55	0	0	74	0	6	0	0	6	0	0	0	0	0	0
12:30	18	42	0	0	60	1	2	0	0	3	0	0	0	0	0	0
12:45	22	51	0	0	73	2	3	0	0	5	0	0	0	0	0	0
SUBTOTAL	144	393	0	0	537	7	26	0	0	33	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	23	73	0	0	96	1	2	0	0	3	0	0	0	0	0	0
15:15	23	75	0	0	98	1	4	0	0	5	0	0	0	0	0	0
15:30	16	85	0	0	101	4	1	0	0	5	0	0	0	0	0	0
15:45	17	88	0	0	105	3	4	0	0	7	0	0	0	0	0	0
16:00	18	97	0	0	115	3	5	0	0	8	0	0	0	0	0	0
16:15	26	82	0	0	108	0	4	0	0	4	0	0	0	0	0	0
16:30	30	90	0	0	120	2	4	0	0	6	0	0	0	0	0	0
16:45	22	111	0	0	133	0	2	0	0	2	0	0	0	0	0	0
17:00	22	82	0	0	104	1	2	0	0	3	0	0	0	0	0	0
17:15	20	77	0	0	97	0	0	0	0	0	0	0	0	0	0	0
17:30	15	79	0	0	94	1	2	0	0	3	0	0	0	0	0	0
17:45	25	35	0	0	60	1	3	0	0	4	0	0	0	0	0	0
SUBTOTAL	257	974	0	0	1231	17	33	0	0	50	0	0	0	0	0	0
GRAND TOTAL	687	2236	0	0	2923	46	106	0	0	152	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	36	12	0	48	0	1	2	0	3	0	0	0	0	0	0
07:15	0	42	17	0	59	0	4	1	0	5	0	0	0	0	0	0
07:30	0	58	32	0	90	0	7	1	0	8	0	0	0	0	0	0
07:45	0	85	41	0	126	0	6	1	0	7	0	0	0	0	0	0
08:00	0	62	24	0	86	0	5	0	0	5	0	0	0	0	0	0
08:15	0	70	20	0	90	0	8	0	0	8	0	0	0	0	0	0
08:30	0	69	26	0	95	0	4	0	0	4	0	0	0	0	0	0
08:45	0	59	17	0	76	0	3	0	0	3	0	0	0	0	0	0
09:00	0	40	18	0	58	0	5	1	0	6	0	0	0	0	0	0
09:15	0	46	12	0	58	0	3	1	0	4	0	0	0	0	0	0
09:30	0	50	14	0	64	0	7	1	0	8	0	0	0	0	0	0
09:45	0	55	8	0	63	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	672	241	0	913	0	56	8	0	64	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	48	20	0	68	0	4	1	0	5	0	0	0	0	0	0
11:15	0	48	7	0	55	0	4	1	0	5	0	0	0	0	0	0
11:30	0	52	11	0	63	0	3	1	0	4	0	0	0	0	0	0
11:45	0	42	18	0	60	0	4	1	0	5	0	0	0	0	0	0
12:00	0	46	6	0	52	0	2	0	0	2	0	0	0	0	0	0
12:15	0	50	8	0	58	0	3	1	0	4	0	0	0	0	0	0
12:30	0	46	13	0	59	0	3	1	0	4	0	0	0	0	0	0
12:45	0	44	12	0	56	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	376	95	0	471	0	26	6	0	32	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Mill St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	69	9	0	78	0	6	0	0	6	0	0	0	0	0	0
15:15	0	91	17	0	108	0	8	0	0	8	0	0	0	0	0	0
15:30	0	88	16	0	104	0	3	0	0	3	0	0	0	0	0	0
15:45	0	89	19	0	108	0	2	0	0	2	0	0	0	0	0	0
16:00	0	85	24	0	109	0	0	1	0	1	0	0	0	0	0	0
16:15	0	101	23	0	124	0	4	2	0	6	0	0	0	0	0	0
16:30	0	98	23	0	121	0	5	0	0	5	0	0	0	0	0	0
16:45	0	102	20	0	122	0	5	0	0	5	0	0	0	0	0	0
17:00	0	122	17	0	139	0	1	0	0	1	0	0	0	0	0	0
17:15	0	89	18	0	107	0	2	0	0	2	0	0	0	0	0	0
17:30	0	101	17	0	118	0	0	0	0	0	0	0	0	0	0	0
17:45	0	73	17	0	90	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	1108	220	0	1328	0	36	3	0	39	0	0	0	0	0	0
GRAND TOTAL	0	2156	556	0	2712	0	118	17	0	135	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	11	0	18	0	29	1	0	0	0	1	0	0	0	0	0	0
07:15	8	0	10	0	18	0	0	0	0	0	0	0	0	0	0	0
07:30	12	0	13	0	25	3	0	2	0	5	0	0	0	0	0	0
07:45	10	0	12	0	22	1	0	2	0	3	0	0	0	0	0	0
08:00	11	0	17	0	28	2	0	3	0	5	0	0	0	0	0	0
08:15	8	0	12	0	20	0	0	1	0	1	0	0	0	0	0	0
08:30	6	0	10	0	16	0	0	2	0	2	0	0	0	0	0	0
08:45	13	0	16	0	29	0	0	4	0	4	0	0	0	0	0	0
09:00	9	0	11	0	20	0	0	1	0	1	0	0	0	0	0	0
09:15	11	0	8	0	19	0	0	1	0	1	0	0	0	0	0	0
09:30	5	0	10	0	15	1	0	2	0	3	0	0	0	0	0	0
09:45	11	0	7	0	18	2	0	1	0	3	0	0	0	0	0	0
SUBTOTAL	115	0	144	0	259	10	0	19	0	29	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	9	0	16	0	25	1	0	0	0	1	0	0	0	0	0	0
11:15	11	0	16	0	27	2	0	2	0	4	0	0	0	0	0	0
11:30	11	0	24	0	35	0	0	2	0	2	0	0	0	0	0	0
11:45	16	0	12	0	28	0	0	1	0	1	0	0	0	0	0	0
12:00	15	0	17	0	32	0	0	1	0	1	0	0	0	0	0	0
12:15	11	0	17	0	28	1	0	0	0	1	0	0	0	0	0	0
12:30	13	0	19	0	32	1	0	1	0	2	0	0	0	0	0	0
12:45	11	0	15	0	26	1	0	1	0	2	0	0	0	0	0	0
SUBTOTAL	97	0	136	0	233	6	0	8	0	14	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	21	0	20	0	41	0	0	1	0	1	0	0	0	0	0	0
15:15	9	0	31	0	40	0	0	0	0	0	0	0	0	0	0	0
15:30	16	0	32	0	48	0	0	1	0	1	0	0	0	0	0	0
15:45	13	0	18	0	31	1	0	1	0	2	0	0	0	0	0	0
16:00	17	0	24	0	41	0	0	0	0	0	0	0	0	0	0	0
16:15	24	0	28	0	52	0	0	1	0	1	0	0	0	0	0	0
16:30	24	0	33	0	57	2	0	0	0	2	0	0	0	0	0	0
16:45	29	0	24	0	53	0	0	0	0	0	0	0	0	0	0	0
17:00	23	0	31	0	54	0	0	0	0	0	0	0	0	0	0	0
17:15	19	0	31	0	50	0	0	0	0	0	0	0	0	0	0	0
17:30	15	0	21	0	36	0	0	0	0	0	0	0	0	0	0	0
17:45	13	0	14	0	27	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	223	0	307	0	530	3	0	4	0	7	0	0	0	0	0	0
GRAND TOTAL	435	0	587	0	1022	19	0	31	0	50	0	0	0	0	0	0

Peak Hour Diagram

Specified Period

From: 07:00:00

To: 10:00:00

One Hour Peak

From: 07:15:00

To: 08:15:00

Intersection: Juliana Dr & Mill St

Site Code: 2332800007

Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Mill St runs N/S

North Approach

	Out	In	Total
	501	299	800
	25	29	54
	0	0	0
Totals	526	328	854

Mill St

	0	0	0
	20	5	0
	366	135	0
Totals	386	140	0

East Approach

	Out	In	Total
	93	249	342
	13	8	21
	0	0	0
Totals	106	257	363

Peds: 0

Peds: 0



Peds: 0

Peds: 0

Totals	269	117	0
	247	114	0
	22	3	0
	0	0	0

Mill St

Juliana Dr

Totals			
0	0	0	0
59	52	7	0
47	41	6	0

South Approach

	Out	In	Total
	361	407	768
	25	26	51
	0	0	0
Totals	386	433	819

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:15 - 08:15)

	North Approach Mill St						South Approach Mill St						East Approach Juliana Dr						West Approach						Total Vehicl es
Start Time	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:15	30	110		0	0	140		46	18	0	0	64	8		10	0	0	18					0		222
07:30	27	95		0	0	122		65	33	0	0	98	15		15	0	0	30					0		250
07:45	55	102		0	0	157		91	42	0	0	133	11		14	0	0	25					0		315
08:00	28	79		0	0	107		67	24	0	0	91	13		20	0	0	33					0		231
Grand Total	140	386		0	0	526		269	117	0	0	386	47		59	0	0	106					0	0	1018
Approach %	26.6	73.4		0	-			69.7	30.3	0	-		44.3		55.7	0	-						-		
Totals %	13.8	37.9		0	51.7			26.4	11.5	0	37.9		4.6		5.8	0	10.4					0			
PHF	0.64	0.88		0	0.84			0.74	0.7	0	0.73		0.78		0.74	0	0.8					0		0.81	
Cars	135	366		0	501			247	114	0	361		41		52	0	93					0		955	
% Cars	96.4	94.8		0	95.2			91.8	97.4	0	93.5		87.2		88.1	0	87.7					0		93.8	
Trucks	5	20		0	25			22	3	0	25		6		7	0	13					0		63	
% Trucks	3.6	5.2		0	4.8			8.2	2.6	0	6.5		12.8		11.9	0	12.3					0		6.2	
Bicycles	0	0		0	0			0	0	0	0		0		0	0	0					0		0	
% Bicycles	0	0		0	0			0	0	0	0		0		0	0	0					0		0	
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 11:30:00
To: 12:30:00

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Mill St runs N/S

North Approach

	Out	In	Total
	269	260	529
	18	16	34
	0	0	0
Totals	287	276	563

Mill St

	0	0	0
	16	2	0
	199	70	0
Totals	215	72	0

↓ ↘ ↻

East Approach

	Out	In	Total
	123	113	236
	5	5	10
	0	0	0
Totals	128	118	246

Peds: 0



Peds: 0

	↑	↘	↻
Totals	202	46	0
	190	43	0
	12	3	0
	0	0	0

Mill St

Juliana Dr

Totals			
0	0	0	0
74	70	4	0
54	53	1	0

↻ ↗ ↓

South Approach

	Out	In	Total
	233	252	485
	15	17	32
	0	0	0
Totals	248	269	517

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

Peak Hour Data (11:30 - 12:30)

	North Approach Mill St						South Approach Mill St						East Approach Juliana Dr						West Approach						Total Vehicl es
Start Time	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
11:30	20	47		0	0	67		55	12	0	0	67	11		26	0	0	37					0		171
11:45	12	50		0	0	62		46	19	0	0	65	16		13	0	0	29					0		156
12:00	21	57		0	0	78		48	6	0	0	54	15		18	0	0	33					0		165
12:15	19	61		0	0	80		53	9	0	0	62	12		17	0	0	29					0		171
Grand Total	72	215		0	0	287		202	46	0	0	248	54		74	0	0	128					0	0	663
Approach %	25.1	74.9		0		-		81.5	18.5	0		-	42.2		57.8	0		-					-		
Totals %	10.9	32.4		0		43.3		30.5	6.9	0		37.4	8.1		11.2	0		19.3					0		
PHF	0.86	0.88		0		0.9		0.92	0.61	0		0.93	0.84		0.71	0		0.86					0		0.97
Cars	70	199		0		269		190	43	0		233	53		70	0		123					0		625
% Cars	97.2	92.6		0		93.7		94.1	93.5	0		94	98.1		94.6	0		96.1					0		94.3
Trucks	2	16		0		18		12	3	0		15	1		4	0		5					0		38
% Trucks	2.8	7.4		0		6.3		5.9	6.5	0		6	1.9		5.4	0		3.9					0		5.7
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0					0		0
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0					0		0
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Mill St runs N/S

North Approach

	Out	In	Total
	465	539	1004
	15	16	31
	0	0	0
Totals	480	555	1035

Mill St

	0	0	0
	12	3	0
	365	100	0
Totals	377	103	0

↓ ↘ ↻

East Approach

	Out	In	Total
	216	183	399
	3	5	8
	0	0	0
Totals	219	188	407

Peds: 0



Juliana Dr

Totals			
0	0	0	0
117	116	1	0
102	100	2	0

↻ ↙ ↓

Peds: 0

Totals	438	85	0
	423	83	0
	15	2	0
	0	0	0

↑ ↘ ↻

Mill St

South Approach

	Out	In	Total
	506	465	971
	17	14	31
	0	0	0
Totals	523	479	1002

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Mill St
Site Code: 2332800007
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

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

	North Approach Mill St						South Approach Mill St						East Approach Juliana Dr						West Approach						Total Vehicl es	
Start Time	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total		
16:15	26	86		0	0	112		105	25	0	0	130	24		29	0	0	53					0		295	
16:30	32	94		0	0	126		103	23	0	0	126	26		33	0	0	59					0		311	
16:45	22	113		0	0	135		107	20	0	0	127	29		24	0	0	53					0		315	
17:00	23	84		0	0	107		123	17	0	0	140	23		31	0	0	54					0		301	
Grand Total	103	377		0	0	480		438	85	0	0	523	102		117	0	0	219					0	0	1222	
Approach %	21.5	78.5		0		-		83.7	16.3	0		-	46.6		53.4	0		-							-	
Totals %	8.4	30.9		0		39.3		35.8	7	0		42.8	8.3		9.6	0		17.9					0			
PHF	0.8	0.83		0		0.89		0.89	0.85	0		0.93	0.88		0.89	0		0.93					0		0.97	
Cars	100	365		0		465		423	83	0		506	100		116	0		216					0		1187	
% Cars	97.1	96.8		0		96.9		96.6	97.6	0		96.7	98		99.1	0		98.6					0		97.1	
Trucks	3	12		0		15		15	2	0		17	2		1	0		3					0		35	
% Trucks	2.9	3.2		0		3.1		3.4	2.4	0		3.3	2		0.9	0		1.4					0		2.9	
Bicycles	0	0		0		0		0	0	0		0	0		0	0		0					0		0	
% Bicycles	0	0		0		0		0	0	0		0	0		0	0		0					0		0	
Peds					0	-					0	-					0	-					0	-	0	
% Peds					0	-					0	-					0	-					0	-		

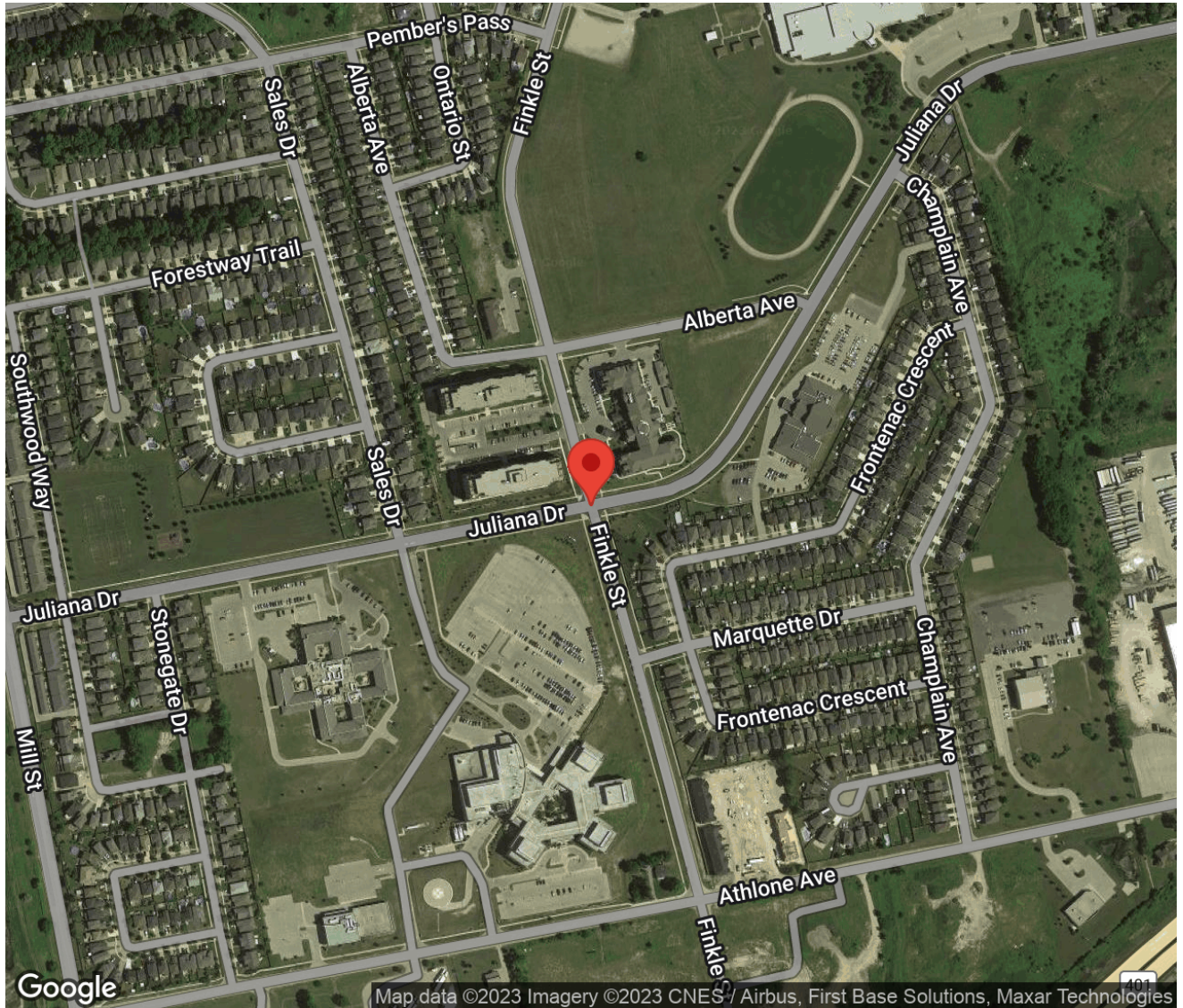
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Finkle St
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800006
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Finkle St
Site Code:	2332800006
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

Finkle St - Traffic Summary

North Approach Totals							South Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	14	29	53	0	96	0	4	23	4	0	31	9	127
08:00 - 09:00	31	28	40	0	99	4	9	36	17	0	62	7	161
09:00 - 10:00	30	36	40	0	106	2	10	19	7	0	36	3	142
BREAK													
11:00 - 12:00	34	24	49	0	107	1	17	33	15	0	65	3	172
12:00 - 13:00	24	31	50	0	105	2	7	22	8	0	37	5	142
BREAK													
15:00 - 16:00	27	35	45	0	107	3	14	41	9	0	64	1	171
16:00 - 17:00	37	35	51	0	123	4	7	37	14	0	58	0	181
17:00 - 18:00	18	29	42	0	89	8	4	25	10	0	39	6	128
GRAND TOTAL	215	247	370	0	832	24	72	236	84	0	392	34	1224

Traffic Count Summary

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

East Approach Totals							West Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	10	121	4	0	135	2	61	139	6	0	206	2	341
08:00 - 09:00	28	100	13	0	141	3	51	139	12	0	202	5	343
09:00 - 10:00	17	72	24	0	113	3	32	123	11	0	166	1	279
BREAK													
11:00 - 12:00	15	126	13	0	154	1	41	134	5	0	180	4	334
12:00 - 13:00	14	136	14	0	164	4	30	145	7	0	182	8	346
BREAK													
15:00 - 16:00	1	111	9	0	121	3	66	180	14	0	260	4	381
16:00 - 17:00	6	155	17	0	178	3	77	188	12	0	277	7	455
17:00 - 18:00	10	152	11	0	173	5	46	140	6	0	192	3	365
GRAND TOTAL	101	973	105	0	1179	24	404	1188	73	0	1665	34	2844

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	1	0	7	0	8	0	0	0	0	0	0	0	0	0	0	0
07:15	4	5	12	0	21	0	0	0	0	0	0	0	0	0	0	0
07:30	4	9	14	0	27	0	0	1	0	1	0	0	0	0	0	0
07:45	5	15	18	0	38	0	0	1	0	1	0	0	0	0	0	0
08:00	8	6	12	0	26	0	2	1	0	3	0	0	0	0	0	1
08:15	6	6	7	0	19	0	0	0	0	0	0	0	0	0	0	1
08:30	9	5	9	0	23	0	0	1	0	1	0	0	0	0	0	2
08:45	8	8	9	0	25	0	0	1	0	1	0	1	0	0	1	0
09:00	7	10	6	0	23	0	1	0	0	1	0	0	0	0	0	2
09:15	11	5	13	0	29	0	0	1	0	1	0	0	0	0	0	0
09:30	8	9	8	0	25	0	1	1	0	2	0	0	0	0	0	0
09:45	4	9	9	0	22	0	1	2	0	3	0	0	0	0	0	0
SUBTOTAL	75	87	124	0	286	0	5	9	0	14	0	1	0	0	1	6

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	13	6	13	0	32	0	0	1	0	1	0	0	0	0	0	0
11:15	9	8	11	0	28	0	0	1	0	1	0	0	0	0	0	0
11:30	6	4	10	0	20	0	0	2	0	2	0	0	0	0	0	0
11:45	6	6	11	0	23	0	0	0	0	0	0	0	0	0	0	1
12:00	9	12	9	0	30	0	1	0	0	1	0	0	0	0	0	1
12:15	6	3	10	0	19	0	0	1	0	1	0	0	0	0	0	0
12:30	3	8	18	0	29	0	0	1	0	1	0	0	0	0	0	0
12:45	6	7	10	0	23	0	0	1	0	1	0	0	0	0	0	1
SUBTOTAL	58	54	92	0	204	0	1	7	0	8	0	0	0	0	0	3

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	7	10	11	0	28	2	1	0	0	3	0	0	0	0	0	1
15:15	3	7	8	0	18	0	1	0	0	1	0	0	0	0	0	1
15:30	5	7	12	0	24	0	0	0	0	0	0	0	0	0	0	0
15:45	10	6	13	0	29	0	3	1	0	4	0	0	0	0	0	1
16:00	8	10	10	0	28	0	0	1	0	1	0	0	0	0	0	0
16:15	10	10	16	0	36	0	0	0	0	0	0	0	0	0	0	2
16:30	10	7	9	0	26	0	0	0	0	0	0	0	0	0	0	1
16:45	9	8	15	0	32	0	0	0	0	0	0	0	0	0	0	1
17:00	5	7	11	0	23	0	0	0	0	0	0	0	0	0	0	0
17:15	5	7	14	0	26	0	1	0	0	1	0	0	0	0	0	1
17:30	4	7	9	0	20	0	0	0	0	0	0	0	0	0	0	6
17:45	4	7	8	0	19	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	80	93	136	0	309	2	6	2	0	10	0	0	0	0	0	15
GRAND TOTAL	213	234	352	0	799	2	12	18	0	32	0	1	0	0	1	24

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	2	7	0	0	9	0	1	0	0	1	0	0	0	0	0	1
07:15	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	3
07:30	2	4	2	0	8	0	1	0	0	1	0	0	0	0	0	3
07:45	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	2
08:00	1	10	6	0	17	1	0	0	0	1	0	0	0	0	0	2
08:15	3	6	4	0	13	1	2	0	0	3	0	0	0	0	0	1
08:30	2	9	3	0	14	0	1	0	0	1	0	0	0	0	0	4
08:45	1	6	4	0	11	0	1	0	0	1	0	1	0	0	1	0
09:00	3	5	1	0	9	0	0	0	0	0	0	0	0	0	0	0
09:15	2	3	1	0	6	0	1	0	0	1	0	0	0	0	0	1
09:30	1	2	2	0	5	1	1	0	0	2	0	0	0	0	0	1
09:45	2	7	3	0	12	1	0	0	0	1	0	0	0	0	0	1
SUBTOTAL	19	67	27	0	113	4	10	1	0	15	0	1	0	0	1	19

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	3	9	7	0	19	1	0	0	0	1	0	0	0	0	0	0
11:15	3	7	3	0	13	1	2	0	0	3	0	0	0	0	0	2
11:30	6	6	3	0	15	0	0	0	0	0	0	1	0	0	1	0
11:45	3	7	2	0	12	0	1	0	0	1	0	0	0	0	0	1
12:00	4	4	1	0	9	0	0	0	0	0	0	0	0	0	0	2
12:15	1	2	3	0	6	0	3	0	0	3	0	0	0	0	0	3
12:30	2	3	2	0	7	0	2	0	0	2	0	0	0	0	0	0
12:45	0	8	2	0	10	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	22	46	23	0	91	2	8	0	0	10	0	1	0	0	1	8

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Finkle St

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	4	12	1	0	17	1	1	1	0	3	0	0	0	0	0	0
15:15	4	11	3	0	18	0	2	0	0	2	0	0	0	0	0	1
15:30	3	6	1	0	10	0	0	0	0	0	0	0	0	0	0	0
15:45	2	9	3	0	14	0	0	0	0	0	0	0	0	0	0	0
16:00	1	10	6	0	17	0	1	0	0	1	0	0	0	0	0	0
16:15	2	5	6	0	13	1	1	0	0	2	0	0	0	0	0	0
16:30	0	7	1	0	8	0	1	0	0	1	0	0	0	0	0	0
16:45	3	12	1	0	16	0	0	0	0	0	0	0	0	0	0	0
17:00	1	8	3	0	12	0	1	0	0	1	0	0	0	0	0	0
17:15	2	6	2	0	10	0	0	0	0	0	0	0	0	0	0	2
17:30	0	4	2	0	6	0	1	0	0	1	0	0	0	0	0	3
17:45	1	5	3	0	9	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	23	95	32	0	150	2	8	1	0	11	0	0	0	0	0	7
GRAND TOTAL	64	208	82	0	354	8	26	2	0	36	0	2	0	0	2	34

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	1	23	1	0	25	1	3	0	0	4	0	0	0	0	0	0
07:15	0	27	0	0	27	0	1	0	0	1	0	0	0	0	0	0
07:30	1	27	1	0	29	0	5	0	0	5	0	0	0	0	0	1
07:45	6	31	2	0	39	1	4	0	0	5	0	0	0	0	0	1
08:00	10	25	3	0	38	0	3	1	0	4	0	0	0	0	0	1
08:15	8	17	2	0	27	0	1	0	0	1	0	0	0	0	0	1
08:30	6	27	3	0	36	0	2	0	0	2	0	0	0	0	0	0
08:45	3	23	4	0	30	1	2	0	0	3	0	0	0	0	0	1
09:00	3	11	7	0	21	1	2	0	0	3	0	0	0	0	0	1
09:15	3	25	7	0	35	0	0	0	0	0	0	0	0	0	0	1
09:30	5	10	5	0	20	0	2	0	0	2	0	0	0	0	0	1
09:45	5	21	5	0	31	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	51	267	40	0	358	4	26	1	0	31	0	0	0	0	0	8

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	2	35	2	0	39	1	1	0	0	2	0	0	0	0	0	0
11:15	6	26	6	0	38	0	1	0	0	1	0	0	0	0	0	0
11:30	1	31	3	0	35	0	2	0	0	2	0	0	0	0	0	1
11:45	5	30	2	0	37	0	0	0	0	0	0	0	0	0	0	0
12:00	4	34	3	0	41	0	1	0	0	1	0	0	0	0	0	3
12:15	1	25	7	0	33	1	1	0	0	2	0	0	0	0	0	1
12:30	4	36	2	0	42	0	2	0	0	2	0	0	0	0	0	0
12:45	4	37	2	0	43	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	27	254	27	0	308	2	8	0	0	10	0	0	0	0	0	5

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	29	3	0	32	0	0	0	0	0	0	0	0	0	0	1
15:15	1	26	3	0	30	0	2	0	0	2	0	0	0	0	0	0
15:30	0	28	1	0	29	0	0	0	0	0	0	0	0	0	0	0
15:45	0	25	2	0	27	0	1	0	0	1	0	0	0	0	0	2
16:00	1	19	5	0	25	0	0	0	0	0	0	0	0	0	0	1
16:15	1	43	4	0	48	0	1	0	0	1	0	0	0	0	0	1
16:30	3	54	7	0	64	0	2	0	0	2	0	0	0	0	0	0
16:45	1	36	1	0	38	0	0	0	0	0	0	0	0	0	0	1
17:00	5	40	3	0	48	0	1	0	0	1	0	0	0	0	0	0
17:15	3	44	3	0	50	0	0	0	0	0	0	0	0	0	0	0
17:30	2	39	2	0	43	0	1	0	0	1	0	0	0	0	0	5
17:45	0	27	3	0	30	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	17	410	37	0	464	0	8	0	0	8	0	0	0	0	0	11
GRAND TOTAL	95	931	104	0	1130	6	42	1	0	49	0	0	0	0	0	24

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	5	21	1	0	27	0	3	0	0	3	0	0	0	0	0	0
07:15	8	31	2	0	41	0	4	0	0	4	0	0	0	0	0	0
07:30	18	32	1	0	51	2	1	0	0	3	0	0	0	0	0	2
07:45	28	46	2	0	76	0	1	0	0	1	0	0	0	0	0	0
08:00	10	50	2	0	62	0	1	0	0	1	0	0	0	0	0	1
08:15	14	25	5	0	44	0	2	0	0	2	0	0	0	0	0	0
08:30	14	33	0	0	47	0	4	0	0	4	0	0	0	0	0	3
08:45	13	22	4	0	39	0	2	1	0	3	0	0	0	0	0	1
09:00	14	31	2	0	47	1	3	1	0	5	0	0	0	0	0	0
09:15	7	33	1	0	41	1	2	0	0	3	0	0	0	0	0	0
09:30	1	26	1	0	28	1	1	0	0	2	0	0	0	0	0	1
09:45	7	27	6	0	40	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	139	377	27	0	543	5	24	2	0	31	0	0	0	0	0	8

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
11:00	7	28	1	0	36	0	2	0	0	2	0	0	0	0	0	0
11:15	8	28	1	0	37	1	0	0	0	1	0	0	0	0	0	2
11:30	13	40	1	0	54	0	1	0	0	1	0	0	0	0	0	1
11:45	12	35	2	0	49	0	0	0	0	0	0	0	0	0	0	1
12:00	8	35	1	0	44	0	1	0	0	1	0	0	0	0	0	1
12:15	7	34	2	0	43	1	2	0	0	3	0	0	0	0	0	2
12:30	7	33	1	0	41	2	1	0	0	3	0	0	0	0	0	3
12:45	5	37	3	0	45	0	2	0	0	2	0	0	0	0	0	2
SUBTOTAL	67	270	12	0	349	4	9	0	0	13	0	0	0	0	0	12

Traffic Count Data

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	13	45	1	0	59	1	0	0	0	1	0	0	0	0	0	2
15:15	15	41	2	0	58	0	1	0	0	1	0	0	0	0	0	1
15:30	20	45	3	0	68	1	1	1	0	3	0	0	0	0	0	1
15:45	16	46	5	0	67	0	1	2	0	3	0	0	0	0	0	0
16:00	25	55	1	0	81	0	2	0	0	2	0	0	0	0	0	4
16:15	14	51	4	0	69	0	3	0	0	3	0	0	0	0	0	2
16:30	23	39	2	0	64	0	2	0	0	2	0	0	0	0	0	1
16:45	15	36	5	0	56	0	0	0	0	0	0	0	0	0	0	0
17:00	16	32	0	0	48	0	1	0	0	1	0	0	0	0	0	0
17:15	13	35	3	0	51	0	0	0	0	0	0	0	0	0	0	2
17:30	10	32	1	0	43	0	0	0	0	0	0	0	0	0	0	1
17:45	7	39	2	0	48	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	187	496	29	0	712	2	12	3	0	17	0	0	0	0	0	14
GRAND TOTAL	393	1143	68	0	1604	11	45	5	0	61	0	0	0	0	0	34

Peak Hour Diagram

Specified Period

From: 07:00:00

To: 10:00:00

One Hour Peak

From: 07:45:00

To: 08:45:00

Intersection: Juliana Dr & Finkle St

Site Code: 2332800006

Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	106	108	214
	5	4	9
	0	0	0
Totals	111	112	223

Finkle St

	0	0	0	0
	3	2	0	0
	46	32	28	0
Totals	49	34	28	0

East Approach

	Out	In	Total
	140	196	336
	12	8	20
	0	0	0
Totals	152	204	356

Juliana Dr

				Totals
	0	0	0	0
	0	0	66	66
	0	8	154	162
	0	0	9	9

Peds: 4



Peds: 9

Juliana Dr

Totals			
	0	0	0
	11	10	1
	110	100	10
	31	30	1

West Approach

	Out	In	Total
	229	152	381
	8	15	23
	0	0	0
Totals	237	167	404

Totals				
	8	35	14	0
	2	3	0	0
	0	0	0	0

Finkle St

South Approach

	Out	In	Total
	52	71	123
	5	3	8
	0	0	0
Totals	57	74	131

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:45 - 08:45)

	North Approach Finkle St						South Approach Finkle St						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es	
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total		
07:45	5	15	19	0	0	39	0	7	1	0	2	8	7	35	2	0	1	44	28	47	2	0	0	77	168	
08:00	8	8	13	0	1	29	2	10	6	0	2	18	10	28	4	0	1	42	10	51	2	0	1	63	152	
08:15	6	6	7	0	1	19	4	8	4	0	1	16	8	18	2	0	1	28	14	27	5	0	0	46	109	
08:30	9	5	10	0	2	24	2	10	3	0	4	15	6	29	3	0	0	38	14	37	0	0	3	51	128	
Grand Total	28	34	49	0	4	111	8	35	14	0	9	57	31	110	11	0	3	152	66	162	9	0	4	237	557	
Approach %	25.2	30.6	44.1	0	-	-	14	61.4	24.6	0	-	-	20.4	72.4	7.2	0	-	-	27.8	68.4	3.8	0	-	-	-	
Totals %	5	6.1	8.8	0	-	19.9	1.4	6.3	2.5	0	-	10.2	5.6	19.7	2	0	-	27.3	11.8	29.1	1.6	0	-	-	42.5	
PHF	0.78	0.57	0.64	0	-	0.71	0.5	0.88	0.58	0	-	0.79	0.78	0.79	0.69	0	-	0.86	0.59	0.79	0.45	0	-	-	0.77	0.83
Cars	28	32	46	0	-	106	6	32	14	0	-	52	30	100	10	0	-	140	66	154	9	0	-	229	527	
% Cars	100	94.1	93.9	0	-	95.5	75	91.4	100	0	-	91.2	96.8	90.9	90.9	0	-	92.1	100	95.1	100	0	-	96.6	94.6	
Trucks	0	2	3	0	-	5	2	3	0	0	-	5	1	10	1	0	-	12	0	8	0	0	-	8	30	
% Trucks	0	5.9	6.1	0	-	4.5	25	8.6	0	0	-	8.8	3.2	9.1	9.1	0	-	7.9	0	4.9	0	0	-	3.4	5.4	
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	
Peds	-	-	-	-	4	-	-	-	-	-	9	-	-	-	-	-	3	-	-	-	-	-	4	-	20	
% Peds	-	-	-	-	20	-	-	-	-	-	45	-	-	-	-	-	15	-	-	-	-	-	20	-	-	

Peak Hour Diagram

Specified Period

From: 11:00:00

To: 13:00:00

One Hour Peak

From: 11:00:00

To: 12:00:00

Intersection: Juliana Dr & Finkle St

Site Code: 2332800006

Count Date: Oct 11, 2023

Weather
conditions:

Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	103	82	185
	4	4	8
	0	1	1
Totals	107	87	194

Finkle St

	0	0	0	0
	4	0	0	0
	45	24	34	0
Totals	49	24	34	0






East Approach

	Out	In	Total
	149	180	329
	5	3	8
	0	0	0
Totals	154	183	337

Juliana Dr

				Totals
	0	0	0	0
	0	1	40	41
	0	3	131	134
	0	0	5	5

Peds: 1



Peds: 4

Peds: 1

Peds: 3

Juliana Dr

Totals			
	0	0	0
	13	13	0
	126	122	4
	15	14	1

West Approach

	Out	In	Total
	176	182	358
	4	10	14
	0	0	0
Totals	180	192	372

Totals				
	15	29	15	0
	2	3	0	0
	0	1	0	0

Finkle St

South Approach

	Out	In	Total
	59	43	102
	5	1	6
	1	0	1
Totals	65	44	109

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

Peak Hour Data (11:00 - 12:00)

Start Time	North Approach Finkle St						South Approach Finkle St						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
11:00	13	6	14	0	0	33	4	9	7	0	0	20	3	36	2	0	0	41	7	30	1	0	0	38	132
11:15	9	8	12	0	0	29	4	9	3	0	2	16	6	27	6	0	0	39	9	28	1	0	2	38	122
11:30	6	4	12	0	0	22	6	7	3	0	0	16	1	33	3	0	1	37	13	41	1	0	1	55	130
11:45	6	6	11	0	1	23	3	8	2	0	1	13	5	30	2	0	0	37	12	35	2	0	1	49	122
Grand Total	34	24	49	0	1	107	17	33	15	0	3	65	15	126	13	0	1	154	41	134	5	0	4	180	506
Approach %	31.8	22.4	45.8	0	-	-	26.2	50.8	23.1	0	-	-	9.7	81.8	8.4	0	-	-	22.8	74.4	2.8	0	-	-	-
Totals %	6.7	4.7	9.7	0	-	21.1	3.4	6.5	3	0	-	12.8	3	24.9	2.6	0	-	30.4	8.1	26.5	1	0	-	35.6	-
PHF	0.65	0.75	0.88	0	-	0.81	0.71	0.92	0.54	0	-	0.81	0.63	0.88	0.54	0	-	0.94	0.79	0.82	0.63	0	-	0.82	0.96
Cars	34	24	45	0	-	103	15	29	15	0	-	59	14	122	13	0	-	149	40	131	5	0	-	176	487
% Cars	100	100	91.8	0	-	96.3	88.2	87.9	100	0	-	90.8	93.3	96.8	100	0	-	96.8	97.6	97.8	100	0	-	97.8	96.2
Trucks	0	0	4	0	-	4	2	3	0	0	-	5	1	4	0	0	-	5	1	3	0	0	-	4	18
% Trucks	0	0	8.2	0	-	3.7	11.8	9.1	0	0	-	7.7	6.7	3.2	0	0	-	3.2	2.4	2.2	0	0	-	2.2	3.6
Bicycles	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles	0	0	0	0	-	0	0	3	0	0	-	1.5	0	0	0	0	-	0	0	0	0	0	-	0	0.2
Peds	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	4	-	9
% Peds	-	-	-	-	11.1	-	-	-	-	-	33.3	-	-	-	-	-	11.1	-	-	-	-	-	44.4	-	-

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 15:45:00
To: 16:45:00

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	119	127	246
	5	3	8
	0	0	0
Totals	124	130	254

Finkle St

	0	0	0	0
	2	3	0	0
	48	33	38	0
Totals	50	36	38	0






East Approach

	Out	In	Total
	164	245	409
	4	8	12
	0	0	0
Totals	168	253	421

Juliana Dr

				Totals
	0	0	0	0
	0	0	78	78
	0	8	191	199
	0	2	12	14

Peds: 7

Peds: 4



Peds: 0

Peds: 4

Juliana Dr

Totals			
	0	0	0
	18	18	0
	145	141	4
	5	5	0

West Approach

	Out	In	Total
	281	194	475
	10	7	17
	0	0	0
Totals	291	201	492

Totals				
	6	34	16	0
	1	3	0	0
	0	0	0	0

Finkle St

South Approach

	Out	In	Total
	52	50	102
	4	5	9
	0	0	0
Totals	56	55	111

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Finkle St
Site Code: 2332800006
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

Peak Hour Data (15:45 - 16:45)

Start Time	North Approach Finkle St						South Approach Finkle St						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
15:45	10	9	14	0	1	33	2	9	3	0	0	14	0	26	2	0	2	28	16	47	7	0	0	70	145
16:00	8	10	11	0	0	29	1	11	6	0	0	18	1	19	5	0	1	25	25	57	1	0	4	83	155
16:15	10	10	16	0	2	36	3	6	6	0	0	15	1	44	4	0	1	49	14	54	4	0	2	72	172
16:30	10	7	9	0	1	26	0	8	1	0	0	9	3	56	7	0	0	66	23	41	2	0	1	66	167
Grand Total	38	36	50	0	4	124	6	34	16	0	0	56	5	145	18	0	4	168	78	199	14	0	7	291	639
Approach %	30.6	29	40.3	0	-	-	10.7	60.7	28.6	0	-	-	3	86.3	10.7	0	-	-	26.8	68.4	4.8	0	-	-	-
Totals %	5.9	5.6	7.8	0	-	19.4	0.9	5.3	2.5	0	-	8.8	0.8	22.7	2.8	0	-	26.3	12.2	31.1	2.2	0	-	45.5	-
PHF	0.95	0.9	0.78	0	-	0.86	0.5	0.77	0.67	0	-	0.78	0.42	0.65	0.64	0	-	0.64	0.78	0.87	0.5	0	-	0.88	0.93
Cars	38	33	48	0	-	119	5	31	16	0	-	52	5	141	18	0	-	164	78	191	12	0	-	281	616
% Cars	100	91.7	96	0	-	96	83.3	91.2	100	0	-	92.9	100	97.2	100	0	-	97.6	100	96	85.7	0	-	96.6	96.4
Trucks	0	3	2	0	-	5	1	3	0	0	-	4	0	4	0	0	-	4	0	8	2	0	-	10	23
% Trucks	0	8.3	4	0	-	4	16.7	8.8	0	0	-	7.1	0	2.8	0	0	-	2.4	0	4	14.3	0	-	3.4	3.6
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Peds	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	7	-	15
% Peds	-	-	-	-	26.7	-	-	-	-	-	0	-	-	-	-	-	26.7	-	-	-	-	-	46.7	-	-

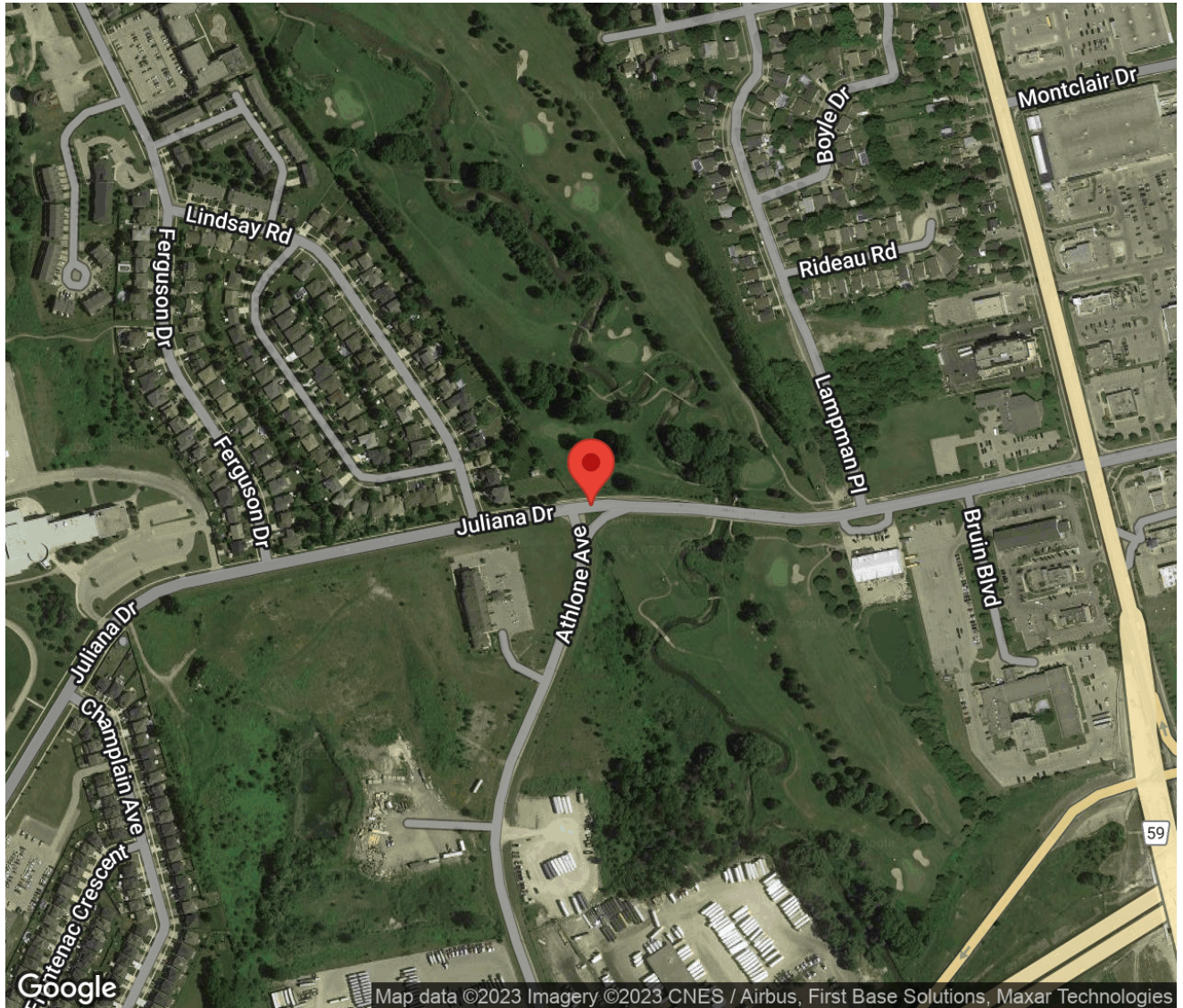
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Athlone Ave
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800005
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Athlone Ave
Site Code:	2332800005
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

Athlone Ave - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	0	0	0	0	0	5	0	75	0	80	0	80
08:00 - 09:00	0	0	0	0	0	0	3	0	67	0	70	0	70
09:00 - 10:00	0	0	0	0	0	0	4	0	102	0	106	0	106
BREAK													
11:00 - 12:00	0	0	0	0	0	0	3	0	96	0	99	0	99
12:00 - 13:00	0	0	0	0	0	0	9	0	149	0	158	0	158
BREAK													
15:00 - 16:00	0	0	0	0	0	0	9	0	149	0	158	1	158
16:00 - 17:00	0	0	0	0	0	0	17	0	184	0	201	0	201
17:00 - 18:00	0	0	0	0	0	0	11	0	100	0	111	0	111
GRAND TOTAL	0	0	0	0	0	0	61	0	922	0	983	1	983

Traffic Count Summary

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

East Approach Totals							West Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	76	208	0	0	284	0	0	233	7	0	240	0	524
08:00 - 09:00	89	212	0	0	301	0	0	259	5	0	264	0	565
09:00 - 10:00	73	176	0	0	249	0	0	231	6	0	237	0	486
BREAK													
11:00 - 12:00	76	256	0	0	332	0	0	263	3	0	266	0	598
12:00 - 13:00	113	268	0	0	381	0	0	260	4	0	264	0	645
BREAK													
15:00 - 16:00	126	239	0	1	366	0	0	292	8	0	300	0	666
16:00 - 17:00	78	327	0	0	405	11	0	343	6	0	349	10	754
17:00 - 18:00	52	320	0	0	372	0	0	253	1	0	254	0	626
GRAND TOTAL	683	2006	0	1	2690	11	0	2134	40	0	2174	10	4864

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Athlone Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	4	0	22	0	26	0	0	4	0	4	0	0	0	0	0	0
07:15	0	0	11	0	11	0	0	1	0	1	0	0	0	0	0	0
07:30	0	0	12	0	12	0	0	1	0	1	0	0	0	0	0	0
07:45	1	0	22	0	23	0	0	2	0	2	0	0	0	0	0	0
08:00	0	0	11	0	11	0	0	1	0	1	0	0	0	0	0	0
08:15	0	0	16	0	16	0	0	4	0	4	0	0	0	0	0	0
08:30	1	0	14	0	15	0	0	3	0	3	0	0	0	0	0	0
08:45	2	0	15	0	17	0	0	3	0	3	0	0	0	0	0	0
09:00	2	0	29	0	31	0	0	4	0	4	0	0	0	0	0	0
09:15	0	0	19	0	19	0	0	3	0	3	0	0	1	0	1	0
09:30	2	0	24	0	26	0	0	2	0	2	0	0	0	0	0	0
09:45	0	0	19	0	19	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	12	0	214	0	226	0	0	29	0	29	0	0	1	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Athlone Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	0	21	0	21	0	0	1	0	1	0	0	0	0	0	0
11:15	1	0	13	0	14	0	0	2	0	2	0	0	0	0	0	0
11:30	2	0	23	0	25	0	0	1	0	1	0	0	0	0	0	0
11:45	0	0	31	0	31	0	0	4	0	4	0	0	0	0	0	0
12:00	1	0	41	0	42	0	0	3	0	3	0	0	0	0	0	0
12:15	6	0	37	0	43	0	0	1	0	1	0	0	0	0	0	0
12:30	0	0	36	0	36	0	0	2	0	2	0	0	0	0	0	0
12:45	2	0	26	0	28	0	0	2	0	2	0	0	1	0	1	0
SUBTOTAL	12	0	228	0	240	0	0	16	0	16	0	0	1	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Athlone Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	5	0	58	0	63	0	0	1	0	1	0	0	0	0	0	0
15:15	0	0	31	0	31	1	0	3	0	4	0	0	0	0	0	0
15:30	3	0	33	0	36	0	0	0	0	0	0	0	0	0	0	1
15:45	0	0	22	0	22	0	0	1	0	1	0	0	0	0	0	0
16:00	2	0	50	0	52	0	0	0	0	0	0	0	0	0	0	0
16:15	4	0	36	0	40	0	0	6	0	6	0	0	0	0	0	0
16:30	7	0	52	0	59	0	0	1	0	1	0	0	0	0	0	0
16:45	4	0	37	0	41	0	0	2	0	2	0	0	0	0	0	0
17:00	2	0	43	0	45	0	0	2	0	2	0	0	0	0	0	0
17:15	5	0	24	0	29	0	0	1	0	1	0	0	1	0	1	0
17:30	3	0	24	0	27	0	0	2	0	2	0	0	0	0	0	0
17:45	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	36	0	412	0	448	1	0	20	0	21	0	0	1	0	1	1
GRAND TOTAL	60	0	854	0	914	1	0	65	0	66	0	0	3	0	3	1

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	15	29	0	0	44	2	2	0	0	4	0	0	0	0	0	0
07:15	17	36	0	0	53	1	1	0	0	2	0	0	0	0	0	0
07:30	18	51	0	0	69	0	6	0	0	6	1	0	0	0	1	0
07:45	20	77	0	0	97	2	6	0	0	8	0	0	0	0	0	0
08:00	15	67	0	0	82	3	2	0	0	5	0	0	0	0	0	0
08:15	22	43	0	0	65	0	1	0	0	1	0	0	0	0	0	0
08:30	17	53	0	0	70	5	2	0	0	7	0	0	0	0	0	0
08:45	25	41	0	0	66	2	3	0	0	5	0	0	0	0	0	0
09:00	12	31	0	0	43	1	1	0	0	2	0	0	0	0	0	0
09:15	21	58	0	0	79	3	0	0	0	3	0	0	0	0	0	0
09:30	17	39	0	0	56	0	1	0	0	1	0	0	0	0	0	0
09:45	18	45	0	0	63	1	1	0	0	2	0	0	0	0	0	0
SUBTOTAL	217	570	0	0	787	20	26	0	0	46	1	0	0	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	16	63	0	0	79	3	2	0	0	5	0	0	0	0	0	0
11:15	15	64	0	0	79	2	2	0	0	4	0	0	0	0	0	0
11:30	13	59	0	0	72	1	1	0	0	2	0	0	0	0	0	0
11:45	25	64	0	0	89	1	1	0	0	2	0	0	0	0	0	0
12:00	22	65	0	0	87	2	1	0	0	3	0	0	0	0	0	0
12:15	29	63	0	0	92	2	2	0	0	4	0	0	0	0	0	0
12:30	25	59	0	0	84	0	1	0	0	1	0	0	0	0	0	0
12:45	31	77	0	0	108	2	0	0	0	2	0	0	0	0	0	0
SUBTOTAL	176	514	0	0	690	13	10	0	0	23	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	23	52	0	0	75	1	1	0	0	2	0	0	0	0	0	0
15:15	37	55	0	1	93	5	3	0	0	8	0	0	0	0	0	0
15:30	34	62	0	0	96	3	1	0	0	4	0	0	0	0	0	0
15:45	20	62	0	0	82	3	3	0	0	6	0	0	0	0	0	0
16:00	22	62	0	0	84	2	0	0	0	2	0	0	0	0	0	0
16:15	17	77	0	0	94	3	0	0	0	3	0	0	0	0	0	11
16:30	14	94	0	0	108	1	2	0	0	3	0	0	0	0	0	0
16:45	16	92	0	0	108	3	0	0	0	3	0	0	0	0	0	0
17:00	19	94	0	0	113	0	0	0	0	0	0	0	0	0	0	0
17:15	22	87	0	0	109	0	0	0	0	0	0	0	0	0	0	0
17:30	9	64	0	0	73	1	0	0	0	1	0	0	0	0	0	0
17:45	0	75	0	0	75	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	233	876	0	1	1110	23	10	0	0	33	0	0	0	0	0	11
GRAND TOTAL	626	1960	0	1	2587	56	46	0	0	102	1	0	0	0	1	11

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	31	1	0	32	0	3	0	0	3	0	0	0	0	0	0
07:15	0	47	2	0	49	0	5	0	0	5	0	0	0	0	0	0
07:30	0	70	0	0	70	0	0	0	0	0	0	0	0	0	0	0
07:45	0	71	4	0	75	0	6	0	0	6	0	0	0	0	0	0
08:00	0	77	2	0	79	0	6	0	0	6	0	0	0	0	0	0
08:15	0	58	1	0	59	0	2	0	0	2	0	0	0	0	0	0
08:30	0	60	2	0	62	0	1	0	0	1	0	0	0	0	0	0
08:45	0	51	0	0	51	0	4	0	0	4	0	0	0	0	0	0
09:00	0	56	2	0	58	0	2	0	0	2	0	0	0	0	0	0
09:15	0	55	1	0	56	0	0	0	0	0	0	0	0	0	0	0
09:30	0	65	1	0	66	0	0	0	0	0	0	0	0	0	0	0
09:45	0	53	1	0	54	0	0	0	0	0	0	1	0	1	0	0
SUBTOTAL	0	694	17	0	711	0	29	0	0	29	0	0	1	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	81	0	0	81	0	3	0	0	3	0	0	0	0	0	0
11:15	0	56	0	0	56	0	0	0	0	0	0	0	0	0	0	0
11:30	0	65	2	0	67	0	1	0	0	1	0	0	0	0	0	0
11:45	0	55	1	0	56	0	2	0	0	2	0	0	0	0	0	0
12:00	0	55	0	0	55	0	3	0	0	3	0	0	0	0	0	0
12:15	0	63	1	0	64	0	2	0	0	2	0	0	1	0	1	0
12:30	0	59	1	0	60	0	3	0	0	3	0	0	0	0	0	0
12:45	0	72	1	0	73	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	0	506	6	0	512	0	17	0	0	17	0	0	1	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	78	4	0	82	0	3	0	0	3	0	0	0	0	0	0
15:15	0	64	1	0	65	0	4	0	0	4	0	0	0	0	0	0
15:30	0	72	1	0	73	0	1	0	0	1	0	0	0	0	0	0
15:45	0	67	2	0	69	0	3	0	0	3	0	0	0	0	0	0
16:00	0	88	0	0	88	0	2	0	0	2	0	0	0	0	0	0
16:15	0	91	4	0	95	0	5	0	0	5	0	0	0	0	0	10
16:30	0	86	1	0	87	0	2	0	0	2	0	0	0	0	0	0
16:45	0	69	0	0	69	0	0	1	0	1	0	0	0	0	0	0
17:00	0	70	1	0	71	0	0	0	0	0	0	0	0	0	0	0
17:15	0	59	0	0	59	0	0	0	0	0	0	0	0	0	0	0
17:30	0	56	0	0	56	0	0	0	0	0	0	0	0	0	0	0
17:45	0	68	0	0	68	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	868	14	0	882	0	20	1	0	21	0	0	0	0	0	10
GRAND TOTAL	0	2068	37	0	2105	0	66	1	0	67	0	0	2	0	2	10

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	313	337	650
	20	22	42
	1	0	1
	334	359	693

Juliana Dr

			Totals
0	0	0	0
0	14	276	290
0	0	7	7

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
0	0	0	0
253	238	15	0
81	75	5	1

Peds: 0

West Approach

	Out	In	Total
	283	239	522
	14	15	29
	0	0	0
	297	254	551

Totals			
	1	61	0
	0	8	0
	0	0	0

Athlone Ave

South Approach

	Out	In	Total
	62	82	144
	8	5	13
	0	1	1
	70	88	158

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:30 - 08:30)

	North Approach						South Approach Athlone Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es								
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total									
07:30					0		0			13	0	0	13	19	57			0	0	76			70	0	0	0	70	159					
07:45					0		1			24	0	0	25	22	83			0	0	105			77	4	0	0	81	211					
08:00					0		0			12	0	0	12	18	69			0	0	87			83	2	0	0	85	184					
08:15					0		0			20	0	0	20	22	44			0	0	66			60	1	0	0	61	147					
Grand Total					0	0	1			69	0	0	70	81	253			0	0	334			290	7	0	0	297	701					
Approach %					-		1.4			98.6	0	-		24.3	75.7			0	-				97.6	2.4	0	-							
Totals %					0		0.1			9.8	0	10		11.6	36.1			0	47.6				41.4	1	0	42.4							
PHF					0		0.25			0.72	0	0.7		0.92	0.76			0	0.8				0.87	0.44	0	0.87	0.83						
Cars					0		1			61	0	62		75	238			0	313				276	7	0	283	658						
% Cars					0		100			88.4	0	88.6		92.6	94.1			0	93.7				95.2	100	0	95.3	93.9						
Trucks					0		0			8	0	8		5	15			0	20				14	0	0	14	42						
% Trucks					0		0			11.6	0	11.4		6.2	5.9			0	6				4.8	0	0	4.7	6						
Bicycles					0		0			0	0	0		1	0			0	1				0	0	0	0	1						
% Bicycles					0		0			0	0	0		1.2	0			0	0.3				0	0	0	0	0.1						
Peds					0	-							0	-							0	-	0					0					
% Peds					0	-							0	-							0	-							0	-			

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 12:00:00
To: 13:00:00

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	371	389	760
	10	19	29
	0	1	1
	381	409	790

Juliana Dr

			Totals
0	0	0	0
0	11	249	260
1	0	3	4

Peds: 0



Peds: 0

Peds: 0

Juliana Dr

Totals			
0	0	0	0
268	264	4	0
113	107	6	0

Peds: 0

West Approach

	Out	In	Total
	252	273	525
	11	4	15
	1	0	1
	264	277	541

Totals			
	9	140	0
	0	8	0
	0	1	0

Athlone Ave

South Approach

	Out	In	Total
	149	110	259
	8	6	14
	1	1	2
	158	117	275

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

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

	North Approach						South Approach Athlone Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es					
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total						
12:00					0		1			44	0	0	45	24	66			0	0	90		58	0	0	0	58	193			
12:15					0		6			38	0	0	44	31	65			0	0	96		65	2	0	0	67	207			
12:30					0		0			38	0	0	38	25	60			0	0	85		62	1	0	0	63	186			
12:45					0		2			29	0	0	31	33	77			0	0	110		75	1	0	0	76	217			
Grand Total					0	0	9			149	0	0	158	113	268			0	0	381					260	4	0	0	264	803
Approach %					-	-	5.7			94.3	0	-	-	29.7	70.3			0	-	-					98.5	1.5	0	-		
Totals %					0	0	1.1			18.6	0	19.7	14.1	33.4			0	47.4	32.4	0.5	0					32.9				
PHF					0	0	0.38			0.85	0	0.88	0.86	0.87			0	0.87	0.87	0.5	0					0.87	0.93			
Cars					0	0	9			140	0	149	107	264			0	371	249	3	0					252	772			
% Cars					0	0	100			94	0	94.3	94.7	98.5			0	97.4	95.8	75	0					95.5	96.1			
Trucks					0	0	0			8	0	8	6	4			0	10	11	0	0					11	29			
% Trucks					0	0	0			5.4	0	5.1	5.3	1.5			0	2.6	4.2	0	0					4.2	3.6			
Bicycles					0	0	0			1	0	1	0	0			0	0	0	1	0					1	2			
% Bicycles					0	0	0			0.7	0	0.6	0	0			0	0	0	25	0					0.4	0.2			
Peds					0	-					0	-					0	-			0					-	0			
% Peds					0	-					0	-					0	-			0					-				

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	423	484	907
	9	18	27
	0	0	0
	432	502	934

Juliana Dr

			Totals
0	0	0	0
0	7	316	323
0	1	6	7

Peds: 10

Peds: 0



Peds: 11

Juliana Dr

Totals			
0	0	0	0
359	357	2	0
73	66	7	0

West Approach

Out	In	Total
322	374	696
8	2	10
0	0	0
330	376	706

Totals			
17	179	0	
	17	168	0
	0	11	0
	0	0	0

Athlone Ave

South Approach

Out	In	Total
185	72	257
11	8	19
0	0	0
196	80	276

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Athlone Ave
Site Code: 2332800005
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

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

	North Approach						South Approach Athlone Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:15					0		4		42	0	0	46	20	77		0	11	97		96	4	0	10	100	243
16:30					0		7		53	0	0	60	15	96		0	0	111		88	1	0	0	89	260
16:45					0		4		39	0	0	43	19	92		0	0	111		69	1	0	0	70	224
17:00					0		2		45	0	0	47	19	94		0	0	113		70	1	0	0	71	231
Grand Total					0	0	17		179	0	0	196	73	359		0	11	432		323	7	0	10	330	958
Approach %					-	-	8.7		91.3	0	-	-	16.9	83.1		0	-	-	-	97.9	2.1	0	-	-	
Totals %					0	0	1.8		18.7	0	0	20.5	7.6	37.5		0	0	45.1	33.7	0.7	0	0	34.4		
PHF					0	0	0.61		0.84	0	0	0.82	0.91	0.93		0	0	0.96	0.84	0.44	0	0	0.83	0.92	
Cars					0	0	17		168	0	0	185	66	357		0	0	423	316	6	0	0	322	930	
% Cars					0	0	100		93.9	0	0	94.4	90.4	99.4		0	0	97.9	97.8	85.7	0	0	97.6	97.1	
Trucks					0	0	0		11	0	0	11	7	2		0	0	9	7	1	0	0	8	28	
% Trucks					0	0	0		6.1	0	0	5.6	9.6	0.6		0	0	2.1	2.2	14.3	0	0	2.4	2.9	
Bicycles					0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	
% Bicycles					0	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	
Peds					0	-					0	-				11	-				10	-		21	
% Peds					0	-					0	-				52.4	-				47.6	-			

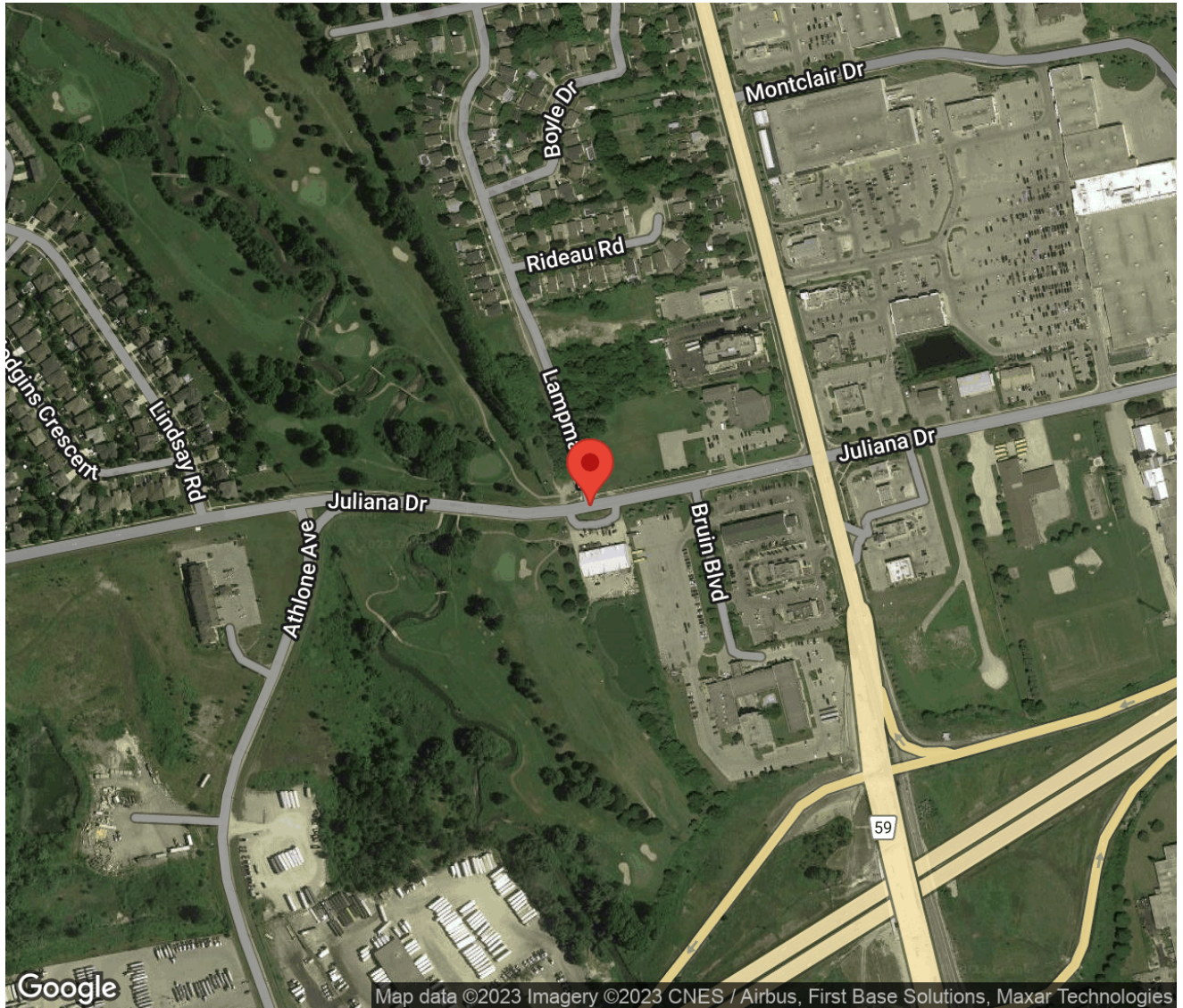
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Lampman Pl
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800004
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Lampman Pl
Site Code:	2332800004
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

Lampman Pl - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	7	0	6	0	13	1	0	0	0	0	0	0	13
08:00 - 09:00	12	0	1	0	13	3	0	0	0	0	0	0	13
09:00 - 10:00	8	0	3	0	11	5	0	0	0	0	0	0	11
BREAK													
11:00 - 12:00	9	0	7	0	16	5	0	0	0	0	0	0	16
12:00 - 13:00	8	0	5	0	13	17	0	0	0	0	0	0	13
BREAK													
15:00 - 16:00	4	0	6	0	10	8	0	0	0	0	0	0	10
16:00 - 17:00	9	0	5	0	14	4	0	0	0	0	0	0	14
17:00 - 18:00	8	0	3	0	11	4	0	0	0	0	0	0	11
GRAND TOTAL	65	0	36	0	101	47	0	0	0	0	0	0	101

Traffic Count Summary

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

East Approach Totals							West Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	288	3	0	291	0	0	312	0	0	312	0	603
08:00 - 09:00	0	288	11	0	299	0	2	325	0	0	327	0	626
09:00 - 10:00	0	250	6	0	256	0	3	327	0	0	330	0	586
BREAK													
11:00 - 12:00	0	319	10	0	329	0	7	360	0	0	367	1	696
12:00 - 13:00	0	379	10	0	389	7	4	399	0	0	403	23	792
BREAK													
15:00 - 16:00	0	356	10	0	366	0	11	429	0	0	440	0	806
16:00 - 17:00	0	410	13	0	423	0	13	509	0	0	522	3	945
17:00 - 18:00	0	364	18	0	382	0	7	353	0	0	360	0	742
GRAND TOTAL	0	2654	81	0	2735	7	47	3014	0	0	3061	27	5796

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Lampman Pl

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
07:45	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	1
08:00	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
08:15	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
08:30	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
08:45	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1
09:00	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
09:15	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	1
09:30	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	2
09:45	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	26	0	10	0	36	1	0	0	0	1	0	0	0	0	0	9

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Lampman Pl

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
11:15	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	0
11:30	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	1
11:45	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	3
12:00	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
12:15	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	7
12:30	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	3
12:45	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	7
SUBTOTAL	17	0	11	0	28	0	0	1	0	1	0	0	0	0	0	22

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Lampman Pl

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	1
15:15	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	3
15:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:00	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
16:30	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	1
16:45	1	0	2	0	3	1	0	0	0	1	0	0	0	0	0	2
17:00	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	6	0	1	0	7	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	20	0	12	0	32	1	0	2	0	3	0	0	0	0	0	16
GRAND TOTAL	63	0	33	0	96	2	0	3	0	5	0	0	0	0	0	47

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	37	1	0	38	0	4	0	0	4	0	0	0	0	0	0
07:15	0	53	0	0	53	0	2	0	0	2	0	0	0	0	0	0
07:30	0	75	0	0	75	0	9	0	0	9	0	0	0	0	0	0
07:45	0	101	2	0	103	0	7	0	0	7	0	0	0	0	0	0
08:00	0	73	4	0	77	0	4	0	0	4	0	0	0	0	0	0
08:15	0	62	1	0	63	0	1	0	0	1	0	0	0	0	0	0
08:30	0	71	1	0	72	0	7	0	0	7	0	0	0	0	0	0
08:45	0	65	5	0	70	0	5	0	0	5	0	0	0	0	0	0
09:00	0	40	2	0	42	0	2	1	0	3	0	0	0	0	0	0
09:15	0	88	0	0	88	0	3	0	0	3	0	0	0	0	0	0
09:30	0	54	1	0	55	0	1	0	0	1	0	0	0	0	0	0
09:45	0	61	2	0	63	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	780	19	0	799	0	46	1	0	47	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	76	4	0	80	0	5	0	0	5	0	0	0	0	0	0
11:15	0	74	1	0	75	0	3	0	0	3	0	0	0	0	0	0
11:30	0	73	3	0	76	0	3	0	0	3	0	0	0	0	0	0
11:45	0	84	2	0	86	0	1	0	0	1	0	0	0	0	0	0
12:00	0	91	2	0	93	0	3	0	0	3	0	0	0	0	0	0
12:15	0	91	2	0	93	0	4	0	0	4	0	0	0	0	0	0
12:30	0	82	4	0	86	0	1	0	0	1	0	0	0	0	0	2
12:45	0	105	2	0	107	0	2	0	0	2	0	0	0	0	0	5
SUBTOTAL	0	676	20	0	696	0	22	0	0	22	0	0	0	0	0	7

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	0	76	2	0	78	0	3	0	0	3	0	0	0	0	0	0
15:15	0	91	1	0	92	0	6	0	0	6	0	0	0	0	0	0
15:30	0	96	3	0	99	0	3	0	0	3	0	0	0	0	0	0
15:45	0	75	4	0	79	0	6	0	0	6	0	0	0	0	0	0
16:00	0	88	4	0	92	0	2	0	0	2	0	0	0	0	0	0
16:15	0	97	2	0	99	0	3	0	0	3	0	0	0	0	0	0
16:30	0	114	4	0	118	0	3	0	0	3	0	0	0	0	0	0
16:45	0	100	3	0	103	0	3	0	0	3	0	0	0	0	0	0
17:00	0	115	6	0	121	0	0	0	0	0	0	0	0	0	0	0
17:15	0	98	6	0	104	0	0	0	0	0	0	0	0	0	0	0
17:30	0	79	5	0	84	0	1	0	0	1	0	0	0	0	0	0
17:45	0	70	1	0	71	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	1099	41	0	1140	0	31	0	0	31	0	0	0	0	0	0
GRAND TOTAL	0	2555	80	0	2635	0	99	1	0	100	0	0	0	0	0	7

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	60	0	0	60	0	4	0	0	4	0	0	0	0	0	0
07:15	0	58	0	0	58	0	6	0	0	6	0	0	0	0	0	0
07:30	0	86	0	0	86	0	2	0	0	2	0	0	0	0	0	0
07:45	0	88	0	0	88	0	8	0	0	8	0	0	0	0	0	0
08:00	1	85	0	0	86	0	6	0	0	6	0	0	0	0	0	0
08:15	1	72	0	0	73	0	7	0	0	7	0	0	0	0	0	0
08:30	0	73	0	0	73	0	6	0	0	6	0	0	0	0	0	0
08:45	0	70	0	0	70	0	6	0	0	6	0	0	0	0	0	0
09:00	0	83	0	0	83	0	5	0	0	5	0	0	0	0	0	0
09:15	0	78	0	0	78	0	3	0	0	3	0	0	0	0	0	0
09:30	1	80	0	0	81	0	4	0	0	4	0	0	0	0	0	0
09:45	2	73	0	0	75	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	5	906	0	0	911	0	58	0	0	58	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	1	98	0	0	99	0	4	0	0	4	0	0	0	0	0	1
11:15	1	72	0	0	73	0	2	0	0	2	0	0	0	0	0	0
11:30	2	91	0	0	93	0	4	0	0	4	0	0	0	0	0	0
11:45	2	86	0	0	88	1	3	0	0	4	0	0	0	0	0	0
12:00	1	102	0	0	103	0	6	0	0	6	0	0	0	0	0	2
12:15	1	92	0	0	93	0	3	0	0	3	0	0	0	0	0	5
12:30	2	91	0	0	93	0	5	0	0	5	0	0	0	0	0	12
12:45	0	95	0	0	95	0	5	0	0	5	0	0	0	0	0	4
SUBTOTAL	10	727	0	0	737	1	32	0	0	33	0	0	0	0	0	24

Traffic Count Data

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	5	128	0	0	133	0	3	0	0	3	0	0	0	0	0	0
15:15	1	88	0	0	89	0	7	0	0	7	0	0	0	0	0	0
15:30	2	107	0	0	109	0	2	0	0	2	0	0	0	0	0	0
15:45	3	91	0	0	94	0	3	0	0	3	0	0	0	0	0	0
16:00	4	136	0	0	140	0	3	0	0	3	0	0	0	0	0	0
16:15	5	119	0	0	124	0	10	0	0	10	0	0	0	0	0	3
16:30	4	131	0	0	135	0	2	0	0	2	0	0	0	0	0	0
16:45	0	106	0	0	106	0	2	0	0	2	0	0	0	0	0	0
17:00	3	113	0	0	116	0	3	0	0	3	0	0	0	0	0	0
17:15	1	77	0	0	78	0	1	0	0	1	0	0	0	0	0	0
17:30	1	77	0	0	78	0	2	0	0	2	0	0	0	0	0	0
17:45	2	78	0	0	80	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	31	1251	0	0	1282	0	40	0	0	40	0	0	0	0	0	3
GRAND TOTAL	46	2884	0	0	2930	1	130	0	0	131	0	0	0	0	0	27

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	16	9	25
	0	0	0
	0	0	0
	16	9	25

Lampman Pl

	0	0	0
	0	0	0
	4	12	0
Totals	4	12	0





East Approach

	Out	In	Total
	318	343	661
	21	23	44
	0	0	0
	339	366	705

Juliana Dr

				Totals
	0	0	0	0
	0	0	2	2
	0	23	331	354





Peds: 0

Peds: 2



Peds: 0

Peds: 0

Juliana Dr

Totals			
0	0	0	0
7	7	0	0
332	311	21	0





West Approach

	Out	In	Total
	333	315	648
	23	21	44
	0	0	0
	356	336	692

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:30 - 08:30)

Start Time	North Approach Lampman Pl						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
07:30	3		1	0	0	4					0			84	0	0	0	84	0	88		0	0	88	176
07:45	3		2	0	1	5					0			108	2	0	0	110	0	96		0	0	96	211
08:00	3		1	0	0	4					0			77	4	0	0	81	1	91		0	0	92	177
08:15	3		0	0	1	3					0			63	1	0	0	64	1	79		0	0	80	147
Grand Total	12		4	0	2	16					0	0		332	7	0	0	339	2	354		0	0	356	711
Approach %	75		25	0	-	-					-	-		97.9	2.1	0	-	-	0.6	99.4		0	-	-	-
Totals %	1.7		0.6	0	2.3	-					0	-		46.7	1	0	-	47.7	0.3	49.8		0	-	50.1	-
PHF	1		0.5	0	0.8	-					0	-		0.77	0.44	0	0.77	-	0.5	0.92		0	-	0.93	0.84
Cars	12		4	0	-	16					0	-		311	7	0	-	318	2	331		0	-	333	667
% Cars	100		100	0	-	100					0	-		93.7	100	0	-	93.8	100	93.5		0	-	93.5	93.8
Trucks	0		0	0	-	0					0	-		21	0	0	-	21	0	23		0	-	23	44
% Trucks	0		0	0	-	0					0	-		6.3	0	0	-	6.2	0	6.5		0	-	6.5	6.2
Bicycles	0		0	0	-	0					0	-		0	0	0	-	0	0	0		0	-	0	0
% Bicycles	0		0	0	-	0					0	-		0	0	0	-	0	0	0		0	-	0	0
Peds					2	-					0	-					0	-				0	-	0	2
% Peds					100	-					0	-					0	-				0	-	0	-

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 12:00:00
To: 13:00:00

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	13	14	27
	0	0	0
	0	0	0
Totals	13	14	27

Lampman Pl

	0	0	0
	0	0	0
	5	8	0
Totals	5	8	0





East Approach

	Out	In	Total
	379	388	767
	10	19	29
	0	0	0
Totals	389	407	796

Juliana Dr

				Totals
	0	0	0	0
	0	0	4	4
	0	19	380	399

Peds: 23

Peds: 17



Peds: 0

Peds: 7

Juliana Dr

Totals			
	0	0	0
	10	10	0
	379	369	10

West Approach

	Out	In	Total
	384	374	758
	19	10	29
	0	0	0
Totals	403	384	787

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

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

	North Approach Lampman Pl						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es
Start Time	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
12:00	2		1	0	0	3					0			94	2	0	0	96	1	108		0	2	109	208
12:15	3		2	0	7	5					0			95	2	0	0	97	1	95		0	5	96	198
12:30	2		1	0	3	3					0			83	4	0	2	87	2	96		0	12	98	188
12:45	1		1	0	7	2					0			107	2	0	5	109	0	100		0	4	100	211
Grand Total	8		5	0	17	13					0	0		379	10	0	7	389	4	399		0	23	403	805
Approach %	61.5		38.5	0	-	-					-	-		97.4	2.6	0	-	-	1	99		0	-	-	
Totals %	1		0.6	0	1.6	-					0	-		47.1	1.2	0	-	48.3	0.5	49.6		0	-	50.1	
PHF	0.67		0.63	0	0.65	-					0	-		0.89	0.63	0	0.89	-	0.5	0.92		0	-	0.92	0.95
Cars	8		5	0	-	13					0	-		369	10	0	-	379	4	380		0	-	384	776
% Cars	100		100	0	-	100					0	-		97.4	100	0	-	97.4	100	95.2		0	-	95.3	96.4
Trucks	0		0	0	-	0					0	-		10	0	0	-	10	0	19		0	-	19	29
% Trucks	0		0	0	-	0					0	-		2.6	0	0	-	2.6	0	4.8		0	-	4.7	3.6
Bicycles	0		0	0	-	0					0	-		0	0	0	-	0	0	0		0	-	0	0
% Bicycles	0		0	0	-	0					0	-		0	0	0	-	0	0	0		0	-	0	0
Peds					17	-					0	-					7	-				23	-	47	
% Peds					36.2	-					0	-					14.9	-				48.9	-	-	

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	14	27	41
	1	0	1
	0	0	0
	15	27	42

Lampman Pl

	0	0	0
	0	1	0
	6	8	0
Totals	6	9	0





East Approach

	Out	In	Total
	441	477	918
	9	18	27
	0	0	0
	450	495	945

Juliana Dr

				Totals
	0	0	0	0
	0	0	12	12
	0	17	469	486





Peds: 3

Peds: 5



Peds: 0

Peds: 0

Juliana Dr

Totals			
0	0	0	0
15	15	0	0
435	426	9	0





West Approach

	Out	In	Total
	481	432	913
	17	9	26
	0	0	0
	498	441	939

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Lampman Pl
Site Code: 2332800004
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

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

Start Time	North Approach Lampman Pl						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
16:15	0		1	0	1	1					0			100	2	0	0	102	5	129		0	3	134	237
16:30	5		1	0	1	6					0			117	4	0	0	121	4	133		0	0	137	264
16:45	2		2	0	2	4					0			103	3	0	0	106	0	108		0	0	108	218
17:00	2		2	0	1	4					0			115	6	0	0	121	3	116		0	0	119	244
Grand Total	9		6	0	5	15					0	0		435	15	0	0	450	12	486		0	3	498	963
Approach %	60		40	0	-	-					-	-		96.7	3.3	0	-	-	2.4	97.6		0	-	-	-
Totals %	0.9		0.6	0	1.6	-					0	-		45.2	1.6	0	-	46.7	1.2	50.5		0	-	51.7	-
PHF	0.45		0.75	0	0.63	-					0	-		0.93	0.63	0	0.93	-	0.6	0.91		0	-	0.91	0.91
Cars	8		6	0		14					0			426	15	0		441	12	469		0		481	936
% Cars	88.9		100	0		93.3					0			97.9	100	0		98	100	96.5		0		96.6	97.2
Trucks	1		0	0		1					0			9	0	0		9	0	17		0		17	27
% Trucks	11.1		0	0		6.7					0			2.1	0	0		2	0	3.5		0		3.4	2.8
Bicycles	0		0	0		0					0			0	0	0		0	0	0		0		0	0
% Bicycles	0		0	0		0					0			0	0	0		0	0	0		0		0	0
Peds					5	-					0	-					0	-				3	-	-	8
% Peds					62.5	-					0	-					0	-				37.5	-	-	-

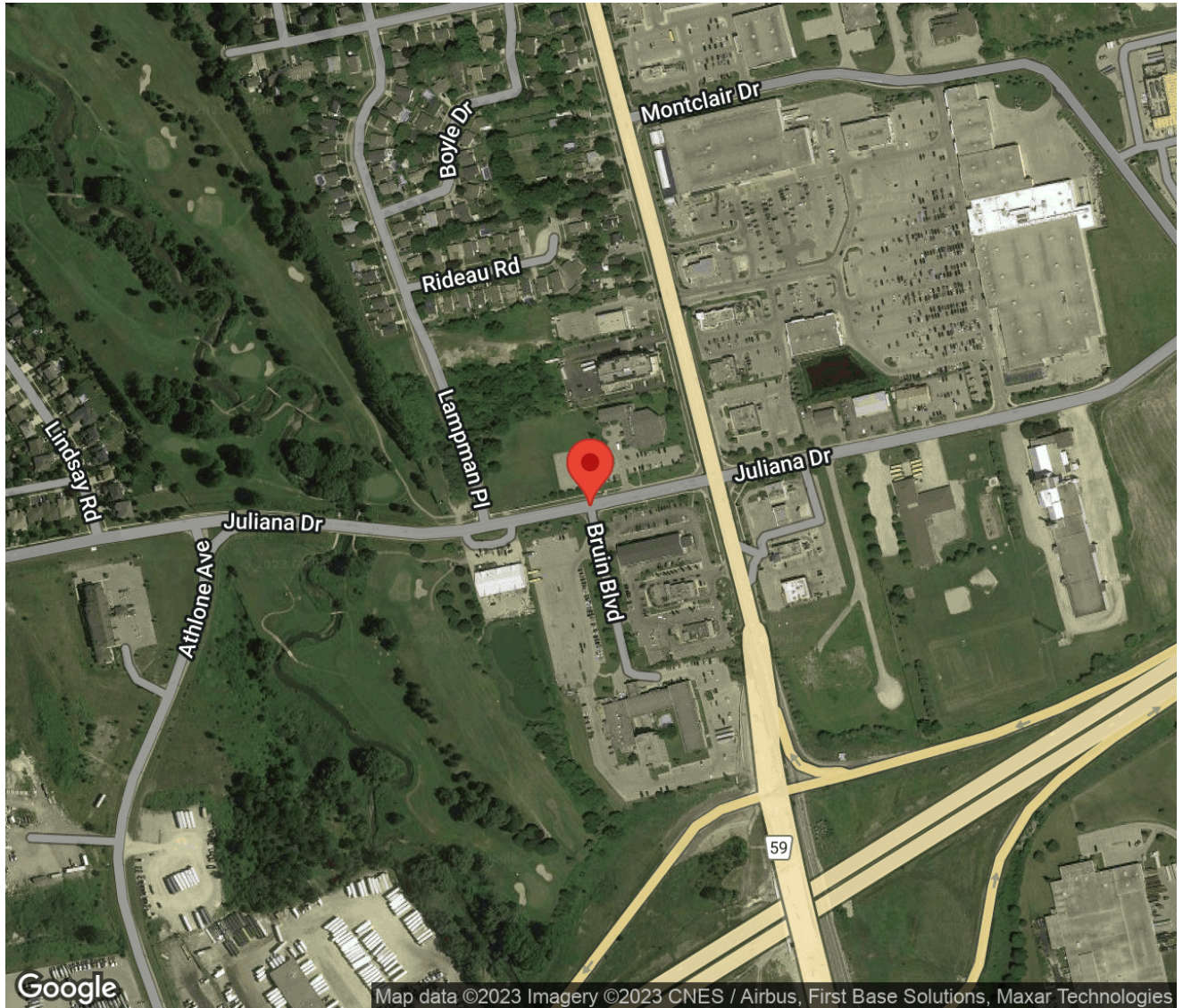
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Bruin Blvd
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800003
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Bruin Blvd
Site Code:	2332800003
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

Bruin Blvd - Traffic Summary

North Approach Totals							South Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	0	0	0	0	0	47	0	70	0	117	2	117
08:00 - 09:00	0	0	0	0	0	0	53	0	60	0	113	0	113
09:00 - 10:00	0	0	0	0	0	0	45	0	85	0	130	2	130
BREAK													
11:00 - 12:00	0	0	0	0	0	0	62	0	79	0	141	0	141
12:00 - 13:00	0	0	0	0	0	0	67	0	76	0	143	9	143
BREAK													
15:00 - 16:00	0	0	0	0	0	0	44	0	64	0	108	2	108
16:00 - 17:00	0	0	0	0	0	0	54	0	67	0	121	0	121
17:00 - 18:00	0	0	0	0	0	0	58	0	79	0	137	0	137
GRAND TOTAL	0	0	0	0	0	0	430	0	580	0	1010	15	1010

Traffic Count Summary

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

East Approach Totals							West Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	26	232	0	0	258	0	0	299	18	0	317	0	575
08:00 - 09:00	19	252	0	0	271	0	0	309	24	1	334	0	605
09:00 - 10:00	21	215	0	1	237	0	0	301	38	0	339	0	576
BREAK													
11:00 - 12:00	41	271	0	1	313	0	0	331	33	0	364	0	677
12:00 - 13:00	24	320	0	0	344	0	0	373	37	0	410	2	754
BREAK													
15:00 - 16:00	28	321	0	0	349	0	0	402	32	0	434	0	783
16:00 - 17:00	30	369	0	0	399	0	0	485	36	0	521	0	920
17:00 - 18:00	46	328	0	0	374	0	0	331	27	0	358	0	732
GRAND TOTAL	235	2308	0	2	2545	0	0	2831	245	1	3077	2	5622

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Bruin Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	9	0	20	0	29	2	0	0	0	2	0	0	0	0	0	1
07:15	8	0	14	0	22	0	0	4	0	4	0	0	0	0	0	0
07:30	12	0	14	0	26	0	0	2	0	2	0	0	0	0	0	0
07:45	13	0	13	0	26	3	0	3	0	6	0	0	0	0	0	1
08:00	15	0	13	0	28	0	0	0	0	0	0	0	0	0	0	0
08:15	13	0	8	0	21	0	0	1	0	1	0	0	0	0	0	0
08:30	9	0	19	0	28	0	0	1	0	1	0	0	0	0	0	0
08:45	16	0	18	0	34	0	0	0	0	0	0	0	0	0	0	0
09:00	12	0	27	0	39	0	0	2	0	2	0	0	0	0	0	0
09:15	15	0	13	0	28	0	0	1	0	1	0	0	0	0	0	1
09:30	7	0	20	0	27	0	0	0	0	0	0	0	0	0	0	1
09:45	11	0	22	0	33	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	140	0	201	0	341	5	0	14	0	19	0	0	0	0	0	4

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Bruin Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	17	0	17	0	34	1	0	0	0	1	0	0	0	0	0	0
11:15	16	0	27	0	43	0	0	1	0	1	0	0	0	0	0	0
11:30	18	0	17	0	35	0	0	1	0	1	0	0	0	0	0	0
11:45	10	0	16	0	26	0	0	0	0	0	0	0	0	0	0	0
12:00	16	0	21	0	37	1	0	4	0	5	0	0	0	0	0	0
12:15	18	0	14	0	32	0	0	1	0	1	0	0	0	0	0	3
12:30	13	0	16	0	29	0	0	1	0	1	0	0	0	0	0	1
12:45	19	0	17	0	36	0	0	2	0	2	0	0	0	0	0	5
SUBTOTAL	127	0	145	0	272	2	0	10	0	12	0	0	0	0	0	9

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Bruin Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	9	0	13	0	22	1	0	1	0	2	0	0	0	0	0	0
15:15	10	0	15	0	25	2	0	1	0	3	0	0	0	0	0	1
15:30	5	0	13	0	18	1	0	1	0	2	0	0	0	0	0	1
15:45	14	0	19	0	33	2	0	1	0	3	0	0	0	0	0	0
16:00	10	0	13	0	23	0	0	0	0	0	0	0	0	0	0	0
16:15	14	0	12	0	26	2	0	0	0	2	0	0	0	0	0	0
16:30	11	0	20	0	31	2	0	1	0	3	0	0	0	0	0	0
16:45	15	0	21	0	36	0	0	0	0	0	0	0	0	0	0	0
17:00	13	0	19	0	32	0	0	0	0	0	0	0	0	0	0	0
17:15	18	0	15	0	33	0	0	1	0	1	0	0	0	0	0	0
17:30	16	0	26	0	42	0	0	1	0	1	0	0	0	0	0	0
17:45	11	0	17	0	28	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	146	0	203	0	349	10	0	7	0	17	0	0	0	0	0	2
GRAND TOTAL	413	0	549	0	962	17	0	31	0	48	0	0	0	0	0	15

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	5	29	0	0	34	1	1	0	0	2	0	0	0	0	0	0
07:15	2	44	0	0	46	3	3	0	0	6	0	0	0	0	0	0
07:30	4	60	0	0	64	2	8	0	0	10	0	0	0	0	0	0
07:45	9	83	0	0	92	0	4	0	0	4	0	0	0	0	0	0
08:00	4	67	0	0	71	1	4	0	0	5	0	0	0	0	0	0
08:15	1	54	0	0	55	1	1	0	0	2	0	0	0	0	0	0
08:30	3	64	0	0	67	1	7	0	0	8	0	0	0	0	0	0
08:45	8	50	0	0	58	0	5	0	0	5	0	0	0	0	0	0
09:00	8	33	0	0	41	0	3	0	0	3	0	0	0	0	0	0
09:15	7	68	0	1	76	0	3	0	0	3	0	0	0	0	0	0
09:30	2	51	0	0	53	0	2	0	0	2	0	0	0	0	0	0
09:45	4	54	0	0	58	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	57	657	0	1	715	9	42	0	0	51	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	8	64	0	0	72	0	4	0	0	4	0	0	0	0	0	0
11:15	13	61	0	0	74	2	3	0	0	5	0	0	0	0	0	0
11:30	9	55	0	1	65	0	3	0	0	3	0	0	0	0	0	0
11:45	6	80	0	0	86	3	1	0	0	4	0	0	0	0	0	0
12:00	10	74	0	0	84	1	2	0	0	3	0	0	0	0	0	0
12:15	6	73	0	0	79	0	5	0	0	5	0	0	0	0	0	0
12:30	2	76	0	0	78	0	1	0	0	1	0	0	0	0	0	0
12:45	4	87	0	0	91	1	2	0	0	3	0	0	0	0	0	0
SUBTOTAL	58	570	0	1	629	7	21	0	0	28	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	6	66	0	0	72	1	1	0	0	2	0	0	0	0	0	0
15:15	2	82	0	0	84	1	6	0	0	7	0	0	0	0	0	0
15:30	5	94	0	0	99	2	2	0	0	4	0	1	0	0	1	0
15:45	10	66	0	0	76	1	3	0	0	4	0	0	0	0	0	0
16:00	8	77	0	0	85	0	2	0	0	2	0	0	0	0	0	0
16:15	12	85	0	0	97	1	1	0	0	2	0	0	0	0	0	0
16:30	2	97	0	0	99	0	1	0	0	1	0	0	0	0	0	0
16:45	7	103	0	0	110	0	3	0	0	3	0	0	0	0	0	0
17:00	13	101	0	0	114	0	0	0	0	0	0	0	0	0	0	0
17:15	7	95	0	0	102	0	0	0	0	0	0	0	0	0	0	0
17:30	12	67	0	0	79	3	1	0	0	4	0	0	0	0	0	0
17:45	8	63	0	0	71	3	1	0	0	4	0	0	0	0	0	0
SUBTOTAL	92	996	0	0	1088	12	21	0	0	33	0	1	0	0	1	0
GRAND TOTAL	207	2223	0	2	2432	28	84	0	0	112	0	1	0	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	54	3	0	57	0	7	0	0	7	0	0	0	0	0	0
07:15	0	52	4	0	56	0	5	1	0	6	0	0	0	0	0	0
07:30	0	79	6	0	85	0	1	0	0	1	0	0	0	0	0	0
07:45	0	93	4	0	97	0	8	0	0	8	0	0	0	0	0	0
08:00	0	81	7	0	88	0	5	1	0	6	0	0	0	0	0	0
08:15	0	71	8	0	79	0	8	0	0	8	0	0	0	0	0	0
08:30	0	65	6	0	71	0	4	0	0	4	0	0	0	0	0	0
08:45	0	69	2	1	72	0	6	0	0	6	0	0	0	0	0	0
09:00	0	78	10	0	88	0	4	2	0	6	0	0	0	0	0	0
09:15	0	69	5	0	74	0	2	0	0	2	0	0	0	0	0	0
09:30	0	83	9	0	92	0	3	0	0	3	0	0	0	0	0	0
09:45	0	60	12	0	72	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	0	854	76	1	931	0	55	4	0	59	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
11:00	0	93	11	0	104	0	5	0	0	5	0	0	0	0	0	0
11:15	0	67	6	0	73	0	2	0	0	2	0	0	0	0	0	0
11:30	0	78	8	0	86	0	1	0	0	1	0	0	0	0	0	0
11:45	0	80	8	0	88	0	5	0	0	5	0	0	0	0	0	0
12:00	0	87	7	0	94	0	5	0	0	5	0	0	0	0	0	0
12:15	0	92	10	0	102	0	2	2	0	4	0	0	0	0	0	0
12:30	0	88	9	0	97	0	4	0	0	4	0	0	0	0	0	0
12:45	0	90	9	0	99	0	5	0	0	5	0	0	0	0	0	2
SUBTOTAL	0	675	68	0	743	0	29	2	0	31	0	0	0	0	0	2

Traffic Count Data

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	127	8	0	135	0	3	1	0	4	0	0	0	0	0	0
15:15	0	82	11	0	93	0	6	1	0	7	0	0	0	0	0	0
15:30	0	97	8	0	105	0	1	0	0	1	0	0	0	0	0	0
15:45	0	83	2	0	85	0	3	1	0	4	0	0	0	0	0	0
16:00	0	131	8	0	139	0	2	0	0	2	0	0	0	0	0	0
16:15	0	111	9	0	120	0	10	0	0	10	0	0	0	0	0	0
16:30	0	128	13	0	141	0	2	0	0	2	0	0	0	0	0	0
16:45	0	98	6	0	104	0	3	0	0	3	0	0	0	0	0	0
17:00	0	107	6	0	113	0	2	0	0	2	0	0	0	0	0	0
17:15	0	77	2	0	79	0	1	0	0	1	0	0	0	0	0	0
17:30	0	69	11	0	80	0	2	0	0	2	0	0	0	0	0	0
17:45	0	71	8	0	79	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	0	1181	92	0	1273	0	37	3	0	40	0	0	0	0	0	0
GRAND TOTAL	0	2710	236	1	2947	0	121	9	0	130	0	0	0	0	0	2

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:30:00
To: 08:30:00

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	282	372	654
	21	28	49
	0	0	0
	303	400	703

Juliana Dr

			Totals
0	0	0	0
0	22	324	346
0	1	25	26

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
0	0	0	0
281	264	17	0
22	18	4	0

Peds: 1

West Approach

	Out	In	Total
	349	317	666
	23	20	43
	0	0	0
	372	337	709

Totals			
	56	54	0
	3	6	0
	0	0	0

Bruin Blvd

South Approach

	Out	In	Total
	101	43	144
	9	5	14
	0	0	0
	110	48	158

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:30 - 08:30)

	North Approach						South Approach Bruin Blvd						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es		
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total			
07:30					0		12		16	0	0	28	6	68		0	0	74		80	6	0	0	86	188		
07:45					0		16		0	1	32	9	87	0		0	96	101		4	0	0	105	233			
08:00					0		15		0	0	28	5	71	0		0	76	86		8	0	0	94	198			
08:15					0		13		9	0	0	22	2	55		0	0	57		79	8	0	0	87	166		
Grand Total					0	0	56		54	0	1	110	22	281		0	0	303		346	26	0	0	372	785		
Approach %					-		50.9		49.1	0	-		7.3	92.7		0	-			93	7	0	-				
Totals %					0		7.1		6.9	0		14	2.8	35.8		0		38.6		44.1	3.3	0		47.4			
PHF					0		0.88		0.84	0		0.86	0.61	0.81		0		0.79		0.86	0.81	0		0.89	0.84		
Cars					0		53		48	0		101	18	264		0		282		324	25	0		349	732		
% Cars					0		94.6		88.9	0		91.8	81.8	94		0		93.1		93.6	96.2	0		93.8	93.2		
Trucks					0		3		6	0		9	4	17		0		21		22	1	0		23	53		
% Trucks					0		5.4		11.1	0		8.2	18.2	6		0		6.9		6.4	3.8	0		6.2	6.8		
Bicycles					0		0		0	0		0	0	0		0		0		0	0	0		0	0		
% Bicycles					0		0		0	0		0	0	0		0		0		0	0	0		0	0		
Peds					0	-					1	-					0	-					0	-			1
% Peds					0	-					100	-					0	-					0	-			

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 12:00:00
To: 13:00:00

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	332	425	757
	12	24	36
	0	0	0
	344	449	793

Juliana Dr

			Totals
0	0	0	0
0	16	357	373
0	2	35	37

Peds: 2

Peds: 0



Peds: 0

Juliana Dr

Totals			
0	0	0	0
320	310	10	0
24	22	2	0

West Approach

Out	In	Total
392	376	768
18	11	29
0	0	0
410	387	797

Totals	67	76	0
	66	68	0
	1	8	0
	0	0	0

Bruin Blvd

South Approach

Out	In	Total
134	57	191
9	4	13
0	0	0
143	61	204

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

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

	North Approach						South Approach Bruin Blvd						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es						
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total							
12:00					0		17			25	0	0	42	11	76			0	0	87			92	7	0	0	99	228			
12:15					0		18			15	0	3	33	6	78			0	0	84			94	12	0	0	106	223			
12:30					0		13			17	0	1	30	2	77			0	0	79			92	9	0	0	101	210			
12:45					0		19			19	0	5	38	5	89			0	0	94			95	9	0	2	104	236			
Grand Total					0	0	67			76	0	9	143	24	320			0	0	344			373	37	0	2	410	897			
Approach %					-		46.9			53.1	0	-		7	93			0	-				91	9	0	-					
Totals %					0		7.5			8.5	0	15.9		2.7	35.7			0	38.4				41.6	4.1	0	45.7					
PHF					0		0.88			0.76	0	0.85		0.55	0.9			0	0.91				0.98	0.77	0	0.97	0.95				
Cars					0		66			68	0	134		22	310			0	332				357	35	0	392	858				
% Cars					0		98.5			89.5	0	93.7		91.7	96.9			0	96.5				95.7	94.6	0	95.6	95.7				
Trucks					0		1			8	0	9		2	10			0	12				16	2	0	18	39				
% Trucks					0		1.5			10.5	0	6.3		8.3	3.1			0	3.5				4.3	5.4	0	4.4	4.3				
Bicycles					0		0			0	0	0		0	0			0	0				0	0	0	0	0				
% Bicycles					0		0			0	0	0		0	0			0	0				0	0	0	0	0				
Peds					0	-							9	-							0	-							2	-	11
% Peds					0	-							81.8	-							0	-							18.2	-	

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

East Approach

	Out	In	Total
	420	516	936
	6	18	24
	0	0	0
	426	534	960

Juliana Dr

			Totals
0	0	0	0
0	17	444	461
0	0	34	34

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
0	0	0	0
391	386	5	0
35	34	1	0

West Approach

	Out	In	Total
	478	439	917
	17	9	26
	0	0	0
	495	448	943

Totals			
57	73	0	
	53	72	0
	4	1	0
	0	0	0

Bruin Blvd

South Approach

	Out	In	Total
	125	68	193
	5	1	6
	0	0	0
	130	69	199

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Bruin Blvd
Site Code: 2332800003
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

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

	North Approach						South Approach Bruin Blvd						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es									
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total										
16:15					0		16					12	0	0	28	13	86					0	0	99		121	9	0	0	130	257			
16:30					0		13					21	0	0	34	2	98					0	0	100		130	13	0	0	143	277			
16:45					0		15					21	0	0	36	7	106					0	0	113		101	6	0	0	107	256			
17:00					0		13					19	0	0	32	13	101					0	0	114		109	6	0	0	115	261			
Grand Total					0	0	57					73	0	0	130	35	391					0	0	426					461	34	0	0	495	1051
Approach %					-	-	43.8					56.2	0	-	8.2	91.8					0	-	93.1	6.9	0	-	-							
Totals %					0	0	5.4					6.9	0	12.4	3.3	37.2					0	40.5	43.9	3.2	0	47.1								
PHF					0	0	0.89					0.87	0	0.9	0.67	0.92					0	0.93	0.89	0.65	0	0.87	0.95							
Cars					0	0	53					72	0	125	34	386					0	420	444	34	0	478	1023							
% Cars					0	0	93					98.6	0	96.2	97.1	98.7					0	98.6	96.3	100	0	96.6	97.3							
Trucks					0	0	4					1	0	5	1	5					0	6	17	0	0	17	28							
% Trucks					0	0	7					1.4	0	3.8	2.9	1.3					0	1.4	3.7	0	0	3.4	2.7							
Bicycles					0	0	0					0	0	0	0	0					0	0	0	0	0	0	0	0						
% Bicycles					0	0	0					0	0	0	0	0					0	0	0	0	0	0	0	0						
Peds					0	-									0	-					0	-					0	-	0					
% Peds					0	-									0	-					0	-					0	-						

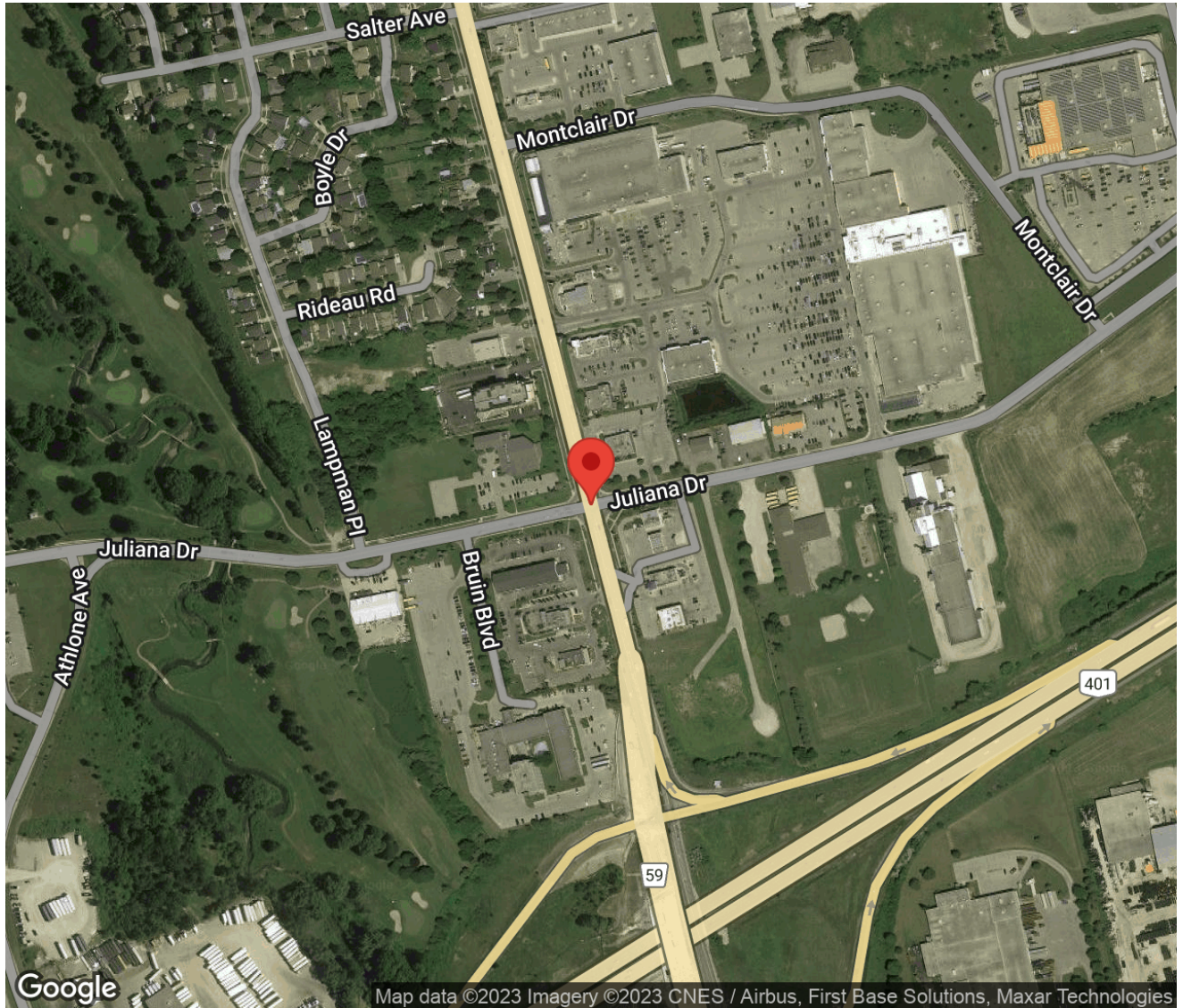
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Norwich Ave
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800002
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Norwich Ave
Site Code:	2332800002
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Traffic Count Summary

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

Norwich Ave - Traffic Summary

North Approach Totals							South Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	30	240	29	0	299	2	98	259	202	0	559	2	858
08:00 - 09:00	29	250	36	0	315	3	80	322	224	0	626	0	941
09:00 - 10:00	44	226	40	0	310	2	57	309	183	0	549	6	859
BREAK													
11:00 - 12:00	61	254	43	0	358	7	77	335	159	0	571	8	929
12:00 - 13:00	62	287	68	0	417	12	89	322	167	0	578	14	995
BREAK													
15:00 - 16:00	56	312	64	0	432	3	89	417	226	0	732	5	1164
16:00 - 17:00	62	407	65	0	534	5	107	494	238	0	839	4	1373
17:00 - 18:00	69	365	69	0	503	10	127	436	188	0	751	1	1254
GRAND TOTAL	413	2341	414	0	3168	44	724	2894	1587	0	5205	40	8373

Traffic Count Summary

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	269	130	9	0	408	3	70	139	151	0	360	3	768
08:00 - 09:00	218	157	22	0	397	2	68	194	107	0	369	6	766
09:00 - 10:00	230	144	30	0	404	2	102	179	115	0	396	3	800
BREAK													
11:00 - 12:00	275	192	36	0	503	5	123	196	92	0	411	11	914
12:00 - 13:00	290	186	54	0	530	10	135	211	103	0	449	5	979
BREAK													
15:00 - 16:00	359	197	56	0	612	3	131	221	121	0	473	3	1085
16:00 - 17:00	418	222	46	0	686	3	159	260	133	0	552	7	1238
17:00 - 18:00	320	182	50	0	552	5	135	168	100	0	403	0	955
GRAND TOTAL	2379	1410	303	0	4092	33	923	1568	922	0	3413	38	7505

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	3	49	3	0	55	0	6	1	0	7	0	0	0	0	0	1
07:15	7	57	5	0	69	0	9	1	0	10	0	0	0	0	0	0
07:30	12	62	6	0	80	0	4	2	0	6	0	0	0	0	0	1
07:45	7	43	11	0	61	1	10	0	0	11	0	0	0	0	0	0
08:00	6	71	8	0	85	0	4	0	0	4	0	0	0	0	0	1
08:15	5	59	7	0	71	2	2	1	0	5	0	0	0	0	0	0
08:30	9	56	8	0	73	0	7	0	0	7	0	0	0	0	0	1
08:45	5	47	12	0	64	2	4	0	0	6	0	0	0	0	0	1
09:00	12	44	7	0	63	0	1	0	0	1	0	0	0	0	0	0
09:15	10	51	13	0	74	0	4	0	0	4	0	0	0	0	0	0
09:30	15	63	12	0	90	0	8	0	0	8	0	2	0	0	2	2
09:45	7	49	8	0	64	0	4	0	0	4	0	0	0	0	0	0
SUBTOTAL	98	651	100	0	849	5	63	5	0	73	0	2	0	0	2	7

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
11:00	17	60	12	0	89	0	3	0	0	3	0	0	0	0	0	0
11:15	14	50	10	0	74	2	6	1	0	9	0	0	0	0	0	2
11:30	13	64	8	0	85	0	8	0	0	8	0	0	0	0	0	1
11:45	15	57	12	0	84	0	6	0	0	6	0	0	0	0	0	4
12:00	10	64	16	0	90	0	3	0	0	3	0	0	0	0	0	2
12:15	18	70	14	0	102	0	5	0	0	5	0	0	0	0	0	2
12:30	11	60	15	0	86	1	2	1	0	4	0	0	0	0	0	8
12:45	22	81	22	0	125	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	120	506	109	0	735	3	35	2	0	40	0	0	0	0	0	19

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	18	71	18	0	107	1	5	0	0	6	0	0	0	0	0	0
15:15	16	51	11	0	78	0	3	0	0	3	0	0	0	0	0	1
15:30	13	92	19	0	124	0	4	0	0	4	0	0	0	0	0	1
15:45	8	83	16	0	107	0	3	0	0	3	0	0	0	0	0	1
16:00	12	111	16	0	139	0	1	0	0	1	0	0	0	0	0	1
16:15	13	98	15	0	126	1	1	0	0	2	0	0	0	0	0	1
16:30	10	96	18	0	124	0	2	0	0	2	0	0	0	0	0	0
16:45	26	97	16	0	139	0	1	0	0	1	0	0	0	0	0	3
17:00	18	121	18	0	157	0	1	0	0	1	0	0	0	0	0	1
17:15	11	96	15	0	122	0	1	0	0	1	0	0	0	0	0	0
17:30	22	74	20	0	116	0	2	0	0	2	0	0	0	0	0	4
17:45	18	69	16	0	103	0	1	0	0	1	0	0	0	0	0	5
SUBTOTAL	185	1059	198	0	1442	2	25	0	0	27	0	0	0	0	0	18
GRAND TOTAL	403	2216	407	0	3026	10	123	7	0	140	0	2	0	0	2	44

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	11	36	32	0	79	1	9	3	0	13	0	0	0	0	0	1
07:15	15	44	49	0	108	2	2	6	0	10	0	0	0	0	0	0
07:30	26	57	46	0	129	5	9	4	0	18	0	0	0	0	0	0
07:45	38	93	56	0	187	0	9	6	0	15	0	0	0	0	0	1
08:00	21	72	48	0	141	3	4	5	0	12	0	0	0	0	0	0
08:15	20	63	57	0	140	0	7	5	0	12	0	0	0	0	0	0
08:30	15	74	63	0	152	3	3	2	0	8	0	0	0	0	0	0
08:45	16	94	33	0	143	2	5	11	0	18	0	0	0	0	0	0
09:00	13	77	38	0	128	1	9	11	0	21	0	0	0	0	0	3
09:15	13	71	31	0	115	2	3	4	0	9	0	0	0	0	0	1
09:30	13	70	37	0	120	1	6	5	0	12	0	1	0	0	1	1
09:45	12	68	50	0	130	2	4	7	0	13	0	0	0	0	0	1
SUBTOTAL	213	819	540	0	1572	22	70	69	0	161	0	1	0	0	1	8

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
11:00	17	71	31	0	119	3	5	7	0	15	0	0	0	0	0	0
11:15	20	65	37	0	122	3	5	3	0	11	0	0	0	0	0	3
11:30	10	89	39	0	138	1	6	3	0	10	0	0	0	0	0	2
11:45	20	87	33	0	140	3	7	6	0	16	0	0	0	0	0	3
12:00	17	71	32	0	120	3	4	6	0	13	0	0	0	0	0	1
12:15	18	61	32	0	111	3	6	7	0	16	0	0	0	0	0	3
12:30	23	76	31	0	130	0	5	11	0	16	0	0	0	0	0	7
12:45	23	97	45	0	165	2	2	3	0	7	0	0	0	0	0	3
SUBTOTAL	148	617	280	0	1045	18	40	46	0	104	0	0	0	0	0	22

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

South Approach - Norwich Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	23	87	49	0	159	2	7	9	0	18	0	0	0	0	0	1
15:15	14	101	36	0	151	4	4	11	0	19	0	0	0	0	0	1
15:30	24	118	60	0	202	3	2	4	0	9	0	0	0	0	0	1
15:45	17	94	51	0	162	2	3	6	0	11	0	1	0	0	1	2
16:00	27	123	46	0	196	2	7	6	0	15	0	0	0	0	0	1
16:15	21	111	41	0	173	2	8	8	0	18	0	0	0	0	0	1
16:30	21	128	64	0	213	0	4	4	0	8	0	0	0	0	0	1
16:45	31	113	63	0	207	3	0	6	0	9	0	0	0	0	0	1
17:00	42	121	42	0	205	0	2	4	0	6	0	0	0	0	0	0
17:15	35	111	53	0	199	1	4	3	0	8	0	0	0	0	0	0
17:30	18	102	43	0	163	4	1	4	0	9	0	0	0	0	0	0
17:45	24	89	38	0	151	3	6	1	0	10	0	0	0	0	0	1
SUBTOTAL	297	1298	586	0	2181	26	48	66	0	140	0	1	0	0	1	10
GRAND TOTAL	658	2734	1406	0	4798	66	158	181	0	405	0	2	0	0	2	40

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	53	21	3	0	77	5	0	0	0	5	0	0	0	0	0	1
07:15	60	28	0	0	88	7	3	0	0	10	0	0	0	0	0	0
07:30	45	28	2	0	75	6	2	1	0	9	0	0	0	0	0	1
07:45	82	43	3	0	128	11	5	0	0	16	0	0	0	0	0	1
08:00	54	41	2	0	97	6	2	0	0	8	0	0	0	0	0	1
08:15	49	32	6	0	87	5	2	0	0	7	0	0	0	0	0	0
08:30	51	40	2	0	93	7	5	2	0	14	0	0	0	0	0	1
08:45	41	32	10	0	83	5	3	0	0	8	0	0	0	0	0	0
09:00	50	24	3	0	77	13	2	0	0	15	0	0	0	0	0	0
09:15	39	48	10	0	97	5	1	0	0	6	0	0	0	0	0	2
09:30	49	30	5	0	84	6	0	0	0	6	0	0	0	0	0	0
09:45	61	39	12	0	112	7	0	0	0	7	0	0	0	0	0	0
SUBTOTAL	634	406	58	0	1098	83	25	3	0	111	0	0	0	0	0	7

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	64	44	8	0	116	5	1	0	0	6	0	0	0	0	0	2
11:15	51	49	10	0	110	5	0	0	0	5	0	0	0	0	0	2
11:30	69	45	10	0	124	5	1	0	0	6	0	0	0	0	0	0
11:45	73	52	8	0	133	3	0	0	0	3	0	0	0	0	0	1
12:00	71	50	14	0	135	2	0	0	0	2	0	0	0	0	0	0
12:15	71	45	13	0	129	4	2	0	0	6	0	0	0	0	0	2
12:30	72	39	16	0	127	6	0	0	0	6	0	0	0	0	0	7
12:45	55	49	11	0	115	9	1	0	0	10	0	0	0	0	0	1
SUBTOTAL	526	373	90	0	989	39	5	0	0	44	0	0	0	0	0	15

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	72	31	13	0	116	9	1	0	0	10	0	0	0	0	0	1
15:15	90	55	8	0	153	6	4	2	0	12	0	0	0	0	0	0
15:30	83	56	15	0	154	3	1	0	0	4	0	0	0	0	0	2
15:45	92	48	18	0	158	4	1	0	0	5	0	0	0	0	0	0
16:00	95	44	15	0	154	5	0	0	0	5	0	0	0	0	0	0
16:15	99	53	11	0	163	4	0	0	0	4	0	0	0	0	0	1
16:30	100	65	11	0	176	2	1	0	0	3	0	0	0	0	0	1
16:45	111	59	9	0	179	2	0	0	0	2	0	0	0	0	0	1
17:00	99	58	15	0	172	2	0	1	0	3	0	0	0	0	0	1
17:15	92	53	11	0	156	5	0	0	0	5	0	0	0	0	0	0
17:30	63	34	10	0	107	5	0	0	0	5	0	0	0	0	0	3
17:45	53	36	13	0	102	1	1	0	0	2	0	0	0	0	0	1
SUBTOTAL	1049	592	149	0	1790	48	9	3	0	60	0	0	0	0	0	11
GRAND TOTAL	2209	1371	297	0	3877	170	39	6	0	215	0	0	0	0	0	33

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	17	27	30	0	74	1	3	1	0	5	0	0	0	0	0	1
07:15	9	28	30	0	67	1	3	3	0	7	0	0	0	0	0	1
07:30	20	31	38	0	89	1	0	3	0	4	0	0	0	0	0	1
07:45	19	42	42	0	103	2	5	4	0	11	0	0	0	0	0	0
08:00	19	55	26	0	100	0	3	2	0	5	0	0	0	0	0	1
08:15	10	41	26	0	77	1	4	4	0	9	0	0	0	0	0	0
08:30	16	44	23	0	83	0	2	3	0	5	0	0	0	0	0	0
08:45	22	39	22	0	83	0	6	1	0	7	0	0	0	0	0	5
09:00	27	53	29	0	109	0	3	3	0	6	0	0	0	0	0	2
09:15	25	34	30	0	89	0	3	1	0	4	0	0	0	0	0	0
09:30	27	46	25	0	98	1	0	1	0	2	0	0	0	0	0	1
09:45	22	37	25	0	84	0	3	1	0	4	0	0	0	0	0	0
SUBTOTAL	233	477	346	0	1056	7	35	27	0	69	0	0	0	0	0	12

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	35	55	20	0	110	1	4	1	0	6	0	0	0	0	0	5
11:15	37	30	25	0	92	0	2	2	0	4	0	0	0	0	0	4
11:30	31	45	20	0	96	0	1	1	0	2	0	0	0	0	0	0
11:45	19	58	20	0	97	0	1	3	0	4	0	0	0	0	0	2
12:00	30	56	24	0	110	0	0	8	0	8	0	0	0	0	0	1
12:15	40	48	16	0	104	0	1	3	0	4	0	0	0	0	0	2
12:30	37	50	19	0	106	1	1	3	0	5	0	0	0	0	0	1
12:45	26	52	28	0	106	1	3	2	0	6	0	0	0	0	0	1
SUBTOTAL	255	394	172	0	821	3	13	23	0	39	0	0	0	0	0	16

Traffic Count Data

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	33	79	27	0	139	0	1	3	0	4	0	0	0	0	0	0
15:15	32	46	27	0	105	0	2	5	0	7	0	0	0	0	0	1
15:30	30	40	37	0	107	1	2	0	0	3	0	0	0	0	0	2
15:45	33	50	21	0	104	2	1	1	0	4	0	0	0	0	0	0
16:00	34	74	29	0	137	1	1	0	0	2	0	0	0	0	0	1
16:15	49	57	28	0	134	1	5	2	0	8	0	0	0	0	0	0
16:30	35	58	49	0	142	0	4	0	0	4	0	0	0	0	0	6
16:45	38	61	23	0	122	1	0	2	0	3	0	0	0	0	0	0
17:00	39	61	30	0	130	0	2	0	0	2	0	0	0	0	0	0
17:15	37	31	27	0	95	0	1	2	0	3	0	0	0	0	0	0
17:30	28	38	24	0	90	0	2	1	0	3	0	0	0	0	0	0
17:45	31	32	16	0	79	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	419	627	338	0	1384	6	22	16	0	44	0	0	0	0	0	10
GRAND TOTAL	907	1498	856	0	3261	16	70	66	0	152	0	0	0	0	0	38

Peak Hour Diagram

Specified Period

From: 07:00:00

To: 10:00:00

One Hour Peak

From: 07:45:00

To: 08:45:00

Intersection: Juliana Dr & Norwich Ave

Site Code: 2332800002

Count Date: Oct 11, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Norwich Ave runs N/S

North Approach

	Out	In	Total
	290	379	669
	27	28	55
	0	0	0
Totals	317	407	724

Norwich Ave

	0	0	0	0
	1	23	3	0
	34	229	27	0
Totals	35	252	30	0

East Approach

	Out	In	Total
	405	433	838
	45	35	80
	0	0	0
Totals	450	468	918

Juliana Dr

				Totals
0	0	0	0	0
0	3	64	67	67
0	14	182	196	196
0	13	117	130	130

Peds: 2



Peds: 1

Juliana Dr

Totals			
0	0	0	0
15	13	2	0
170	156	14	0
265	236	29	0

West Approach

	Out	In	Total
	363	284	647
	30	21	51
	0	0	0
Totals	393	305	698

Totals				
	94	302	224	0
	6	23	18	0
	0	0	0	0

Norwich Ave

South Approach

	Out	In	Total
	620	582	1202
	47	65	112
	0	0	0
Totals	667	647	1314

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Norwich Ave						South Approach Norwich Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:45	8	53	11	0	0	72	38	102	62	0	1	202	93	48	3	0	1	144	21	47	46	0	0	114	532
08:00	6	75	8	0	1	89	24	76	53	0	0	153	60	43	2	0	1	105	19	58	28	0	1	105	452
08:15	7	61	8	0	0	76	20	70	62	0	0	152	54	34	6	0	0	94	11	45	30	0	0	86	408
08:30	9	63	8	0	1	80	18	77	65	0	0	160	58	45	4	0	1	107	16	46	26	0	0	88	435
Grand Total	30	252	35	0	2	317	100	325	242	0	1	667	265	170	15	0	3	450	67	196	130	0	1	393	1827
Approach %	9.5	79.5	11	0	-	-	15	48.7	36.3	0	-	-	58.9	37.8	3.3	0	-	-	17	49.9	33.1	0	-	-	-
Totals %	1.6	13.8	1.9	0	-	17.4	5.5	17.8	13.2	0	-	36.5	14.5	9.3	0.8	0	-	24.6	3.7	10.7	7.1	0	-	21.5	-
PHF	0.83	0.84	0.8	0	-	0.89	0.66	0.8	0.93	0	-	0.83	0.71	0.89	0.63	0	-	0.78	0.8	0.84	0.71	0	-	0.86	0.86
Cars	27	229	34	0	-	290	94	302	224	0	-	620	236	156	13	0	-	405	64	182	117	0	-	363	1678
% Cars	90	90.9	97.1	0	-	91.5	94	92.9	92.6	0	-	93	89.1	91.8	86.7	0	-	90	95.5	92.9	90	0	-	92.4	91.8
Trucks	3	23	1	0	-	27	6	23	18	0	-	47	29	14	2	0	-	45	3	14	13	0	-	30	149
% Trucks	10	9.1	2.9	0	-	8.5	6	7.1	7.4	0	-	7	10.9	8.2	13.3	0	-	10	4.5	7.1	10	0	-	7.6	8.2
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Peds	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	1	-	7
% Peds	-	-	-	-	28.6	-	-	-	-	-	14.3	-	-	-	-	-	42.9	-	-	-	-	-	14.3	-	-

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 12:00:00
To: 13:00:00

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Norwich Ave runs N/S

North Approach

	Out	In	Total
	403	492	895
	14	19	33
	0	0	0
Totals	417	511	928

Norwich Ave

	0	0	0	0
	1	12	1	0
	67	275	61	0
Totals	68	287	62	0






East Approach

	Out	In	Total
	506	407	913
	24	33	57
	0	0	0
Totals	530	440	970

Juliana Dr

				Totals
	0	0	0	0
	0	2	133	135
	0	5	206	211
	0	16	87	103

Peds: 5

Peds: 12



Peds: 10

Juliana Dr

Totals			
	0	0	0
	54	54	0
	186	183	3
	290	269	21

Peds: 14

West Approach

	Out	In	Total
	426	331	757
	23	12	35
	0	0	0
Totals	449	343	792

				
Totals	89	322	167	0
	81	305	140	0
	8	17	27	0
	0	0	0	0

Norwich Ave

South Approach

	Out	In	Total
	526	631	1157
	52	49	101
	0	0	0
Totals	578	680	1258

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

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

Start Time	North Approach Norwich Ave						South Approach Norwich Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
12:00	10	67	16	0	2	93	20	75	38	0	1	133	73	50	14	0	0	137	30	56	32	0	1	118	481
12:15	18	75	14	0	2	107	21	67	39	0	3	127	75	47	13	0	2	135	40	49	19	0	2	108	477
12:30	12	62	16	0	8	90	23	81	42	0	7	146	78	39	16	0	7	133	38	51	22	0	1	111	480
12:45	22	83	22	0	0	127	25	99	48	0	3	172	64	50	11	0	1	125	27	55	30	0	1	112	536
Grand Total	62	287	68	0	12	417	89	322	167	0	14	578	290	186	54	0	10	530	135	211	103	0	5	449	1974
Approach %	14.9	68.8	16.3	0	-	-	15.4	55.7	28.9	0	-	-	54.7	35.1	10.2	0	-	-	30.1	47	22.9	0	-	-	-
Totals %	3.1	14.5	3.4	0	21.1	-	4.5	16.3	8.5	0	29.3	-	14.7	9.4	2.7	0	26.8	-	6.8	10.7	5.2	0	22.7	-	-
PHF	0.7	0.86	0.77	0	0.82	-	0.89	0.81	0.87	0	0.84	-	0.93	0.93	0.84	0	0.97	-	0.84	0.94	0.8	0	0.95	-	0.92
Cars	61	275	67	0	-	403	81	305	140	0	-	526	269	183	54	0	-	506	133	206	87	0	-	426	1861
% Cars	98.4	95.8	98.5	0	-	96.6	91	94.7	83.8	0	-	91	92.8	98.4	100	0	-	95.5	98.5	97.6	84.5	0	-	94.9	94.3
Trucks	1	12	1	0	-	14	8	17	27	0	-	52	21	3	0	0	-	24	2	5	16	0	-	23	113
% Trucks	1.6	4.2	1.5	0	-	3.4	9	5.3	16.2	0	-	9	7.2	1.6	0	0	-	4.5	1.5	2.4	15.5	0	-	5.1	5.7
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Peds	-	-	-	-	12	-	-	-	-	-	14	-	-	-	-	-	10	-	-	-	-	-	5	-	41
% Peds	-	-	-	-	29.3	-	-	-	-	-	34.1	-	-	-	-	-	24.4	-	-	-	-	-	12.2	-	-

Peak Hour Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 16:15:00

To: 17:15:00

Intersection: Juliana Dr & Norwich Ave

Site Code: 2332800002

Count Date: Oct 11, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Norwich Ave runs N/S

North Approach

	Out	In	Total
	546	680	1226
	6	17	23
	0	0	0
Totals	552	697	1249

Norwich Ave

	0	0	0	0
	0	5	1	0
	67	412	67	0
Totals	67	417	68	0






East Approach

	Out	In	Total
	690	514	1204
	12	34	46
	0	0	0
Totals	702	548	1250

Juliana Dr

				Totals
0	0	0	0	0
0	2	161	163	163
0	11	237	248	248
0	4	130	134	134






Peds: 5



Peds: 6

Peds: 4

Peds: 3

Juliana Dr

Totals			
0	0	0	0
47	46	1	0
236	235	1	0
419	409	10	0






West Approach

	Out	In	Total
	528	417	945
	17	6	23
	0	0	0
Totals	545	423	968

Totals				
	115	473	210	0
	5	14	22	0
	0	0	0	0

Norwich Ave

South Approach

	Out	In	Total
	798	951	1749
	41	19	60
	0	0	0
Totals	839	970	1809

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Norwich Ave
Site Code: 2332800002
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

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

Start Time	North Approach Norwich Ave						South Approach Norwich Ave						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
16:15	14	99	15	0	1	128	23	119	49	0	1	191	103	53	11	0	1	167	50	62	30	0	0	142	628
16:30	10	98	18	0	0	126	21	132	68	0	1	221	102	66	11	0	1	179	35	62	49	0	6	146	672
16:45	26	98	16	0	3	140	34	113	69	0	1	216	113	59	9	0	1	181	39	61	25	0	0	125	662
17:00	18	122	18	0	1	158	42	123	46	0	0	211	101	58	16	0	1	175	39	63	30	0	0	132	676
Grand Total	68	417	67	0	5	552	120	487	232	0	3	839	419	236	47	0	4	702	163	248	134	0	6	545	2638
Approach %	12.3	75.5	12.1	0	-	-	14.3	58	27.7	0	-	-	59.7	33.6	6.7	0	-	-	29.9	45.5	24.6	0	-	-	-
Totals %	2.6	15.8	2.5	0	-	20.9	4.5	18.5	8.8	0	-	31.8	15.9	8.9	1.8	0	-	26.6	6.2	9.4	5.1	0	-	20.7	-
PHF	0.65	0.85	0.93	0	-	0.87	0.71	0.92	0.84	0	-	0.95	0.93	0.89	0.73	0	-	0.97	0.82	0.98	0.68	0	-	0.93	0.98
Cars	67	412	67	0	-	546	115	473	210	0	-	798	409	235	46	0	-	690	161	237	130	0	-	528	2562
% Cars	98.5	98.8	100	0	-	98.9	95.8	97.1	90.5	0	-	95.1	97.6	99.6	97.9	0	-	98.3	98.8	95.6	97	0	-	96.9	97.1
Trucks	1	5	0	0	-	6	5	14	22	0	-	41	10	1	1	0	-	12	2	11	4	0	-	17	76
% Trucks	1.5	1.2	0	0	-	1.1	4.2	2.9	9.5	0	-	4.9	2.4	0.4	2.1	0	-	1.7	1.2	4.4	3	0	-	3.1	2.9
Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Peds	-	-	-	-	5	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	6	-	18
% Peds	-	-	-	-	27.8	-	-	-	-	-	16.7	-	-	-	-	-	22.2	-	-	-	-	-	33.3	-	-

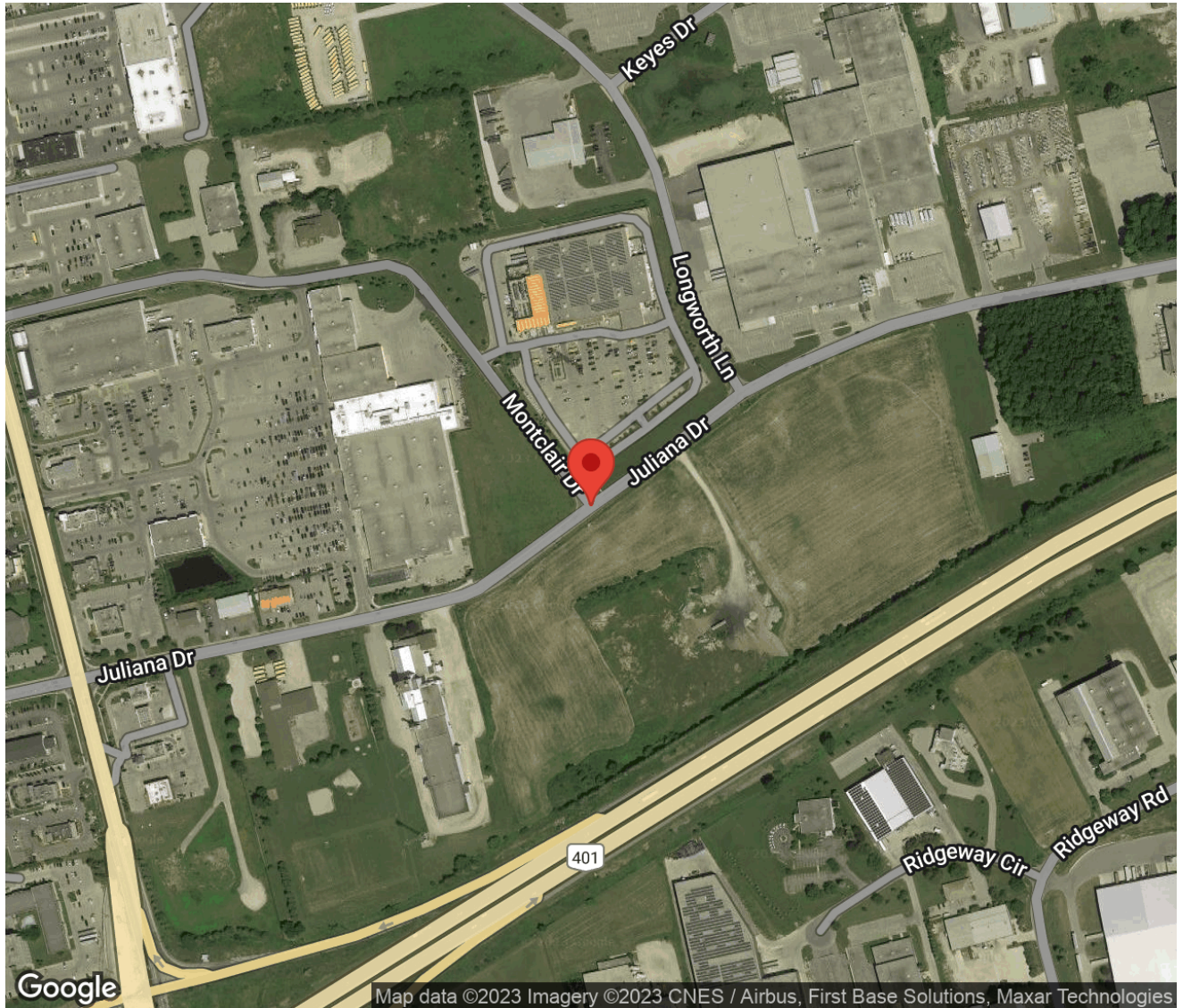
Project #23-328 - McIntosh Perry

Intersection Count Report

Intersection: Juliana Dr & Montclair Dr
Municipality: Woodstock
Count Date: Wednesday, Oct 11, 2023
Site Code: 2332800001
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 11:00-13:00, 15:00-18:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Juliana Dr & Montclair Dr
Site Code:	2332800001
Municipality:	Woodstock
Count Date:	Oct 11, 2023



Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	8	0	14	0	22	1	0	0	0	0	0	0	22
08:00 - 09:00	15	0	18	0	33	0	0	0	0	0	0	0	33
09:00 - 10:00	27	0	36	0	63	0	0	0	0	0	0	0	63
BREAK													
11:00 - 12:00	67	0	40	0	107	0	0	0	0	0	0	0	107
12:00 - 13:00	81	0	45	0	126	1	0	0	0	0	0	0	126
BREAK													
15:00 - 16:00	57	0	35	0	92	0	0	0	0	0	0	0	92
16:00 - 17:00	64	0	48	0	112	0	0	0	0	0	0	0	112
17:00 - 18:00	55	0	44	0	99	0	0	0	0	0	0	0	99
GRAND TOTAL	374	0	280	0	654	2	0	0	0	0	0	0	654

Traffic Count Summary

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

Juliana Dr - Traffic Summary

East Approach Totals							West Approach Totals						
Hour	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	353	27	0	380	0	21	310	0	0	331	0	711
08:00 - 09:00	0	335	53	0	388	0	31	352	0	0	383	0	771
09:00 - 10:00	0	390	92	0	482	0	45	282	0	0	327	0	809
BREAK													
11:00 - 12:00	0	409	139	0	548	0	41	325	0	0	366	0	914
12:00 - 13:00	0	435	151	0	586	0	53	354	0	0	407	0	993
BREAK													
15:00 - 16:00	0	537	110	0	647	0	40	422	0	0	462	0	1109
16:00 - 17:00	0	618	132	0	750	0	41	437	0	0	478	0	1228
17:00 - 18:00	0	431	95	0	526	0	42	360	0	0	402	0	928
GRAND TOTAL	0	3508	799	0	4307	0	314	2842	0	0	3156	0	7463

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Montclair Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	1	0	1	0	2	0	0	1	0	1	0	0	0	0	0	0
07:15	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
07:30	2	0	6	0	8	0	0	2	0	2	0	0	0	0	0	0
07:45	2	0	4	0	6	0	0	0	0	0	0	0	0	0	0	1
08:00	1	0	4	0	5	0	0	1	0	1	0	0	0	0	0	0
08:15	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0
08:30	4	0	5	0	9	0	0	1	0	1	0	0	0	0	0	0
08:45	7	0	6	0	13	0	0	0	0	0	0	0	0	0	0	0
09:00	2	0	9	0	11	1	0	1	0	2	0	0	1	0	1	0
09:15	7	0	9	0	16	0	0	2	0	2	0	0	0	0	0	0
09:30	8	0	6	0	14	0	0	1	0	1	0	0	0	0	0	0
09:45	8	0	6	0	14	1	0	1	0	2	0	0	0	0	0	0
SUBTOTAL	48	0	57	0	105	2	0	10	0	12	0	0	1	0	1	1

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Montclair Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	10	0	7	0	17	1	0	1	0	2	0	0	0	0	0	0
11:15	18	0	11	0	29	0	0	0	0	0	0	0	0	0	0	0
11:30	15	0	9	0	24	3	0	1	0	4	0	0	0	0	0	0
11:45	20	0	10	0	30	0	0	1	0	1	0	0	0	0	0	0
12:00	22	0	8	0	30	2	0	1	0	3	0	0	0	0	0	0
12:15	21	0	14	0	35	0	0	0	0	0	0	0	0	0	0	0
12:30	13	0	14	0	27	0	0	1	0	1	0	0	0	0	0	0
12:45	21	0	7	0	28	2	0	0	0	2	0	0	0	0	0	1
SUBTOTAL	140	0	80	0	220	8	0	5	0	13	0	0	0	0	0	1

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

North Approach - Montclair Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	15	0	3	0	18	1	0	0	0	1	0	0	0	0	0	0
15:15	12	0	16	0	28	0	0	2	0	2	0	0	0	0	0	0
15:30	11	0	9	0	20	0	0	0	0	0	0	0	0	0	0	0
15:45	18	0	4	0	22	0	0	1	0	1	0	0	0	0	0	0
16:00	16	0	14	0	30	1	0	0	0	1	0	0	0	0	0	0
16:15	17	0	6	0	23	0	0	0	0	0	0	0	0	0	0	0
16:30	14	0	8	0	22	0	0	1	0	1	0	0	0	0	0	0
16:45	16	0	18	0	34	0	0	1	0	1	0	0	0	0	0	0
17:00	10	0	10	0	20	0	0	0	0	0	0	0	0	0	0	0
17:15	15	0	16	0	31	0	0	0	0	0	0	0	0	0	0	0
17:30	21	0	9	0	30	0	0	1	0	1	0	0	0	0	0	0
17:45	9	0	8	0	17	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	174	0	121	0	295	2	0	6	0	8	0	0	0	0	0	0
GRAND TOTAL	362	0	258	0	620	12	0	21	0	33	0	0	1	0	1	2

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	61	5	0	66	0	4	0	0	4	0	0	0	0	0	0
07:15	0	78	5	0	83	0	12	1	0	13	0	1	0	0	1	0
07:30	0	84	5	0	89	0	8	2	0	10	0	0	0	0	0	0
07:45	0	93	9	0	102	0	12	0	0	12	0	0	0	0	0	0
08:00	0	81	6	0	87	0	9	0	0	9	0	0	0	0	0	0
08:15	0	71	11	0	82	0	9	0	0	9	0	0	0	0	0	0
08:30	0	80	9	0	89	0	8	2	0	10	0	0	0	0	0	0
08:45	0	70	25	0	95	0	7	0	0	7	0	0	0	0	0	0
09:00	0	82	23	0	105	0	10	0	0	10	0	0	0	0	0	0
09:15	0	96	22	0	118	0	1	0	0	1	0	0	0	0	0	0
09:30	0	88	19	0	107	0	6	0	0	6	0	0	0	0	0	0
09:45	0	99	27	0	126	0	8	1	0	9	0	0	0	0	0	0
SUBTOTAL	0	983	166	0	1149	0	94	6	0	100	0	1	0	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	98	33	0	131	0	3	1	0	4	0	0	0	0	0	0
11:15	0	84	31	0	115	0	4	1	0	5	0	0	0	0	0	0
11:30	0	107	35	0	142	0	2	3	0	5	0	0	0	0	0	0
11:45	0	110	35	0	145	0	1	0	0	1	0	0	0	0	0	0
12:00	0	134	51	0	185	0	1	0	0	1	0	0	0	0	0	0
12:15	0	95	41	0	136	0	5	0	0	5	0	0	0	0	0	0
12:30	0	91	28	0	119	0	5	0	0	5	0	0	0	0	0	0
12:45	0	96	30	0	126	0	8	1	0	9	0	0	0	0	0	0
SUBTOTAL	0	815	284	0	1099	0	29	6	0	35	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

East Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	104	21	0	125	0	7	0	0	7	0	0	0	0	0	0
15:15	0	117	27	0	144	0	2	1	0	3	0	0	0	0	0	0
15:30	0	172	31	0	203	0	2	0	0	2	0	0	0	0	0	0
15:45	0	128	30	0	158	0	5	0	0	5	0	0	0	0	0	0
16:00	0	168	34	0	202	0	6	1	0	7	0	0	0	0	0	0
16:15	0	141	30	0	171	0	3	0	0	3	0	0	0	0	0	0
16:30	0	153	35	0	188	0	4	0	0	4	0	0	0	0	0	0
16:45	0	141	32	0	173	0	2	0	0	2	0	0	0	0	0	0
17:00	0	135	28	0	163	0	1	0	0	1	0	0	0	0	0	0
17:15	0	116	30	0	146	0	5	0	0	5	0	0	0	0	0	0
17:30	0	87	20	0	107	0	4	0	0	4	0	0	0	0	0	0
17:45	0	82	17	0	99	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	0	1544	335	0	1879	0	42	2	0	44	0	0	0	0	0	0
GRAND TOTAL	0	3342	785	0	4127	0	165	14	0	179	0	1	0	0	1	0

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	3	60	0	0	63	0	6	0	0	6	0	0	0	0	0	0
07:15	4	66	0	0	70	0	9	0	0	9	0	0	0	0	0	0
07:30	3	69	0	0	72	2	2	0	0	4	0	0	0	0	0	0
07:45	9	87	0	0	96	0	11	0	0	11	0	0	0	0	0	0
08:00	5	97	0	0	102	0	8	0	0	8	0	0	0	0	0	0
08:15	8	88	0	0	96	1	6	0	0	7	0	0	0	0	0	0
08:30	8	76	0	0	84	1	5	0	0	6	0	0	0	0	0	0
08:45	5	63	0	0	68	3	9	0	0	12	0	0	0	0	0	0
09:00	10	64	0	0	74	1	17	0	0	18	0	0	0	0	0	0
09:15	13	50	0	0	63	0	8	0	0	8	0	0	0	0	0	0
09:30	8	65	0	0	73	0	7	0	0	7	0	0	0	0	0	0
09:45	12	63	0	0	75	1	8	0	0	9	0	0	0	0	0	0
SUBTOTAL	88	848	0	0	936	9	96	0	0	105	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
11:00	9	84	0	0	93	1	5	0	0	6	0	0	0	0	0	0
11:15	10	61	0	0	71	0	6	0	0	6	0	0	0	0	0	0
11:30	10	71	0	0	81	0	2	0	0	2	0	0	0	0	0	0
11:45	11	86	0	0	97	0	10	0	0	10	0	0	0	0	0	0
12:00	9	73	0	0	82	1	6	0	0	7	0	0	0	0	0	0
12:15	14	89	0	0	103	0	8	0	0	8	0	0	0	0	0	0
12:30	15	72	0	0	87	0	10	0	0	10	0	0	0	0	0	0
12:45	12	93	0	0	105	2	3	0	0	5	0	0	0	0	0	0
SUBTOTAL	90	629	0	0	719	4	50	0	0	54	0	0	0	0	0	0

Traffic Count Data

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Municipality: Woodstock
Count Date: Oct 11, 2023

West Approach - Juliana Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	9	115	0	0	124	0	9	0	0	9	0	0	0	0	0	0
15:15	9	91	0	0	100	1	13	0	0	14	0	0	0	0	0	0
15:30	11	87	0	0	98	0	4	0	0	4	0	0	0	0	0	0
15:45	9	97	0	0	106	1	6	0	0	7	0	0	0	0	0	0
16:00	10	95	0	0	105	1	5	0	0	6	0	0	0	0	0	0
16:15	8	96	0	0	104	1	13	0	0	14	0	1	0	0	1	0
16:30	12	86	0	0	98	0	8	0	0	8	0	0	0	0	0	0
16:45	9	128	0	0	137	0	5	0	0	5	0	0	0	0	0	0
17:00	8	98	0	0	106	0	8	0	0	8	0	0	0	0	0	0
17:15	10	104	0	0	114	0	5	0	0	5	0	0	0	0	0	0
17:30	10	71	0	0	81	0	6	0	0	6	0	0	0	0	0	0
17:45	14	66	0	0	80	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	119	1134	0	0	1253	4	84	0	0	88	0	1	0	0	1	0
GRAND TOTAL	297	2611	0	0	2908	17	230	0	0	247	0	1	0	0	1	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 09:00:00
To: 10:00:00

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	55	134	189
	7	3	10
	1	0	1
	63	137	200

Montclair Dr

	1	0	0
	5	2	0
	30	25	0
Totals	36	27	0





East Approach

	Out	In	Total
	456	267	723
	26	42	68
	0	0	0
	482	309	791

Juliana Dr

				Totals
	0	0	0	0
	0	2	43	45
	0	40	242	282

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
0	0	0	0
92	91	1	0
390	365	25	0

Peds: 0

West Approach

	Out	In	Total
	285	395	680
	42	30	72
	0	1	1
	327	426	753

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023
Period: 07:00 - 10:00

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

Start Time	North Approach Montclair Dr						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
09:00	3		11	0	0	14					0			92	23	0	0	115	11	81		0	0	92	221
09:15	7		11	0	0	18					0			97	22	0	0	119	13	58		0	0	71	208
09:30	8		7	0	0	15					0			94	19	0	0	113	8	72		0	0	80	208
09:45	9		7	0	0	16					0			107	28	0	0	135	13	71		0	0	84	235
Grand Total	27		36	0	0	63					0	0		390	92	0	0	482	45	282		0	0	327	872
Approach %	42.9		57.1	0	-	-					-	-		80.9	19.1	0	-	-	13.8	86.2		0	-	-	-
Totals %	3.1		4.1	0	-	7.2					0			44.7	10.6	0	-	55.3	5.2	32.3		0	-	37.5	
PHF	0.75		0.82	0	-	0.88					0			0.91	0.82	0	-	0.89	0.87	0.87		0	-	0.89	0.93
Cars	25		30	0	-	55					0			365	91	0	-	456	43	242		0	-	285	796
% Cars	92.6		83.3	0	-	87.3					0			93.6	98.9	0	-	94.6	95.6	85.8		0	-	87.2	91.3
Trucks	2		5	0	-	7					0			25	1	0	-	26	2	40		0	-	42	75
% Trucks	7.4		13.9	0	-	11.1					0			6.4	1.1	0	-	5.4	4.4	14.2		0	-	12.8	8.6
Bicycles	0		1	0	-	1					0			0	0	0	-	0	0	0		0	-	0	1
% Bicycles	0		2.8	0	-	1.6					0			0	0	0	-	0	0	0		0	-	0	0.1
Peds					0	-					0	-					0	-					0	-	0
% Peds					0	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 11:00:00
To: 13:00:00

One Hour Peak

From: 11:30:00
To: 12:30:00

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	119	206	325
	8	4	12
	0	0	0
Totals	127	210	337

Montclair Dr

	0	0	0
	3	5	0
	41	78	0
Totals	44	83	0





East Approach

	Out	In	Total
	608	397	1005
	12	31	43
	0	0	0
Totals	620	428	1048

Juliana Dr

				Totals
	0	0	0	0
	0	1	44	45
	0	26	319	345

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
	0	0	0
	165	162	3
	455	446	9

Peds: 0

West Approach

	Out	In	Total
	363	487	850
	27	12	39
	0	0	0
Totals	390	499	889

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023
Period: 11:00 - 13:00

Peak Hour Data (11:30 - 12:30)

	North Approach Montclair Dr						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
11:30	18		10	0	0	28					0			109	38	0	0	147	10	73		0	0	83	258
11:45	20		11	0	0	31					0			111	35	0	0	146	11	96		0	0	107	284
12:00	24		9	0	0	33					0			135	51	0	0	186	10	79		0	0	89	308
12:15	21		14	0	0	35					0			100	41	0	0	141	14	97		0	0	111	287
Grand Total	83		44	0	0	127					0	0		455	165	0	0	620	45	345		0	0	390	1137
Approach %	65.4		34.6	0	-	-					-	-	73.4	26.6	0	-	-	11.5	88.5		0	-	-		
Totals %	7.3		3.9	0	11.2						0		40	14.5	0	54.5		4	30.3		0		34.3		
PHF	0.86		0.79	0	0.91						0		0.84	0.81	0	0.83		0.8	0.89		0		0.88	0.92	
Cars	78		41	0		119					0		446	162	0		608	44	319		0		363	1090	
% Cars	94		93.2	0		93.7					0		98	98.2	0		98.1	97.8	92.5		0		93.1	95.9	
Trucks	5		3	0		8					0		9	3	0		12	1	26		0		27	47	
% Trucks	6		6.8	0		6.3					0		2	1.8	0		1.9	2.2	7.5		0		6.9	4.1	
Bicycles	0		0	0		0					0		0	0	0		0	0	0		0		0	0	
% Bicycles	0		0	0		0					0		0	0	0		0	0	0		0		0	0	
Peds					0	-					0	-					0	-				0	-	0	
% Peds					0	-					0	-					0	-				0	-		

Peak Hour Diagram

Specified Period

From: 15:00:00
To: 18:00:00

One Hour Peak

From: 16:00:00
To: 17:00:00

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Juliana Dr runs E/W

North Approach

	Out	In	Total
	109	170	279
	3	3	6
	0	0	0
Totals	112	173	285

Montclair Dr

	0	0	0
	2	1	0
	46	63	0
Totals	48	64	0





East Approach

	Out	In	Total
	734	468	1202
	16	32	48
	0	1	1
Totals	750	501	1251

Juliana Dr

				Totals
	0	0	0	0
	0	2	39	41
	1	31	405	437

Peds: 0

Peds: 0



Peds: 0

Juliana Dr

Totals			
	0	0	0
	132	131	0
	618	603	15

Peds: 0

West Approach

	Out	In	Total
	444	649	1093
	33	17	50
	1	0	1
Totals	478	666	1144

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Juliana Dr & Montclair Dr
Site Code: 2332800001
Count Date: Oct 11, 2023
Period: 15:00 - 18:00

Peak Hour Data (16:00 - 17:00)

	North Approach Montclair Dr						South Approach						East Approach Juliana Dr						West Approach Juliana Dr						Total Vehicl es
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	17		14	0	0	31					0			174	35	0	0	209	11	100		0	0	111	351
16:15	17		6	0	0	23					0			144	30	0	0	174	9	110		0	0	119	316
16:30	14		9	0	0	23					0			157	35	0	0	192	12	94		0	0	106	321
16:45	16		19	0	0	35					0			143	32	0	0	175	9	133		0	0	142	352
Grand Total	64		48	0	0	112					0	0		618	132	0	0	750	41	437		0	0	478	1340
Approach %	57.1		42.9	0		-					-		82.4	17.6	0		-	8.6	91.4		0		-		
Totals %	4.8		3.6	0		8.4					0		46.1	9.9	0		56	3.1	32.6		0		35.7		
PHF	0.94		0.63	0		0.8					0		0.89	0.94	0		0.9	0.85	0.82		0		0.84	0.95	
Cars	63		46	0		109					0		603	131	0		734	39	405		0		444	1287	
% Cars	98.4		95.8	0		97.3					0		97.6	99.2	0		97.9	95.1	92.7		0		92.9	96	
Trucks	1		2	0		3					0		15	1	0		16	2	31		0		33	52	
% Trucks	1.6		4.2	0		2.7					0		2.4	0.8	0		2.1	4.9	7.1		0		6.9	3.9	
Bicycles	0		0	0		0					0		0	0	0		0	0	1		0		1	1	
% Bicycles	0		0	0		0					0		0	0	0		0	0	0.2		0		0.2	0.1	
Peds					0	-					0	-					0	-				0	-	0	
% Peds					0	-					0	-					0	-				0	-		

Appendix B

TRAFFIC PROJECTION FIGURES

Mill Street (CR 12) at Juliana Drive

Finkle Street at Juliana Drive

Athlone Avenue at Juliana Drive

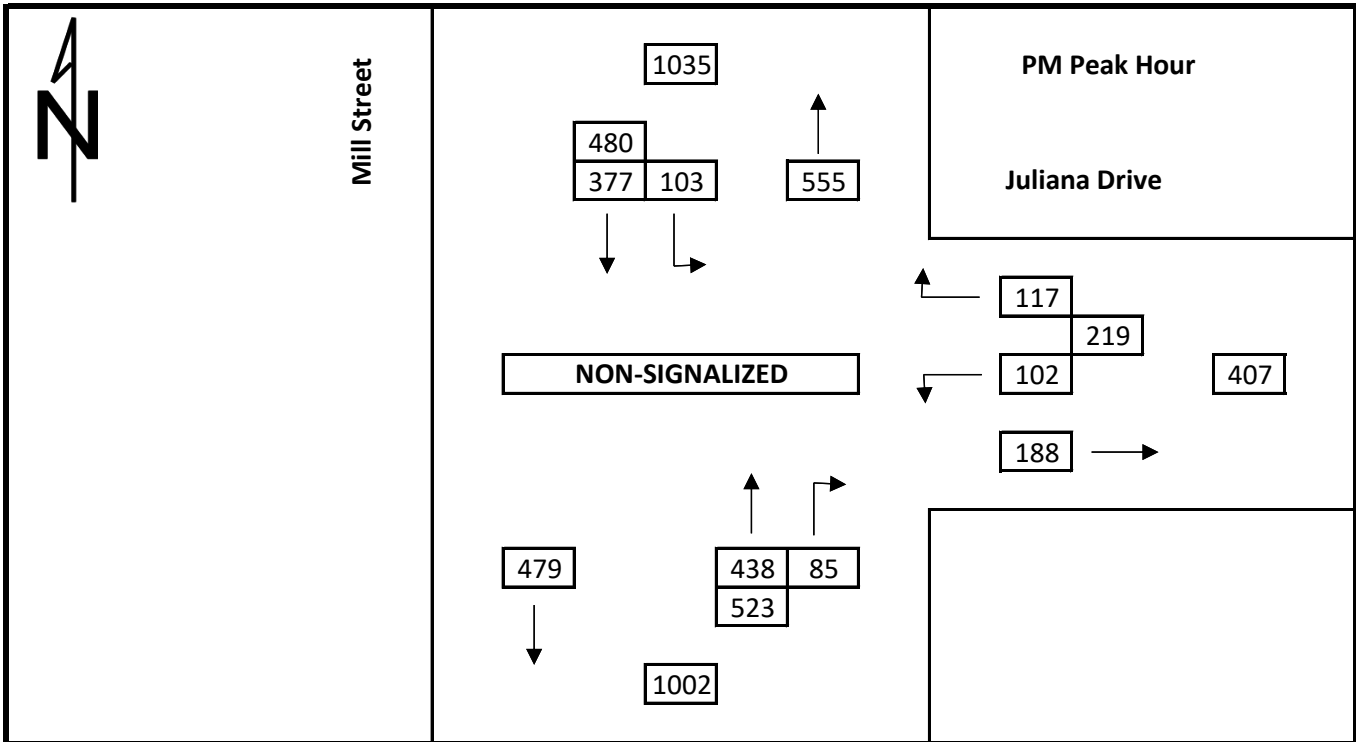
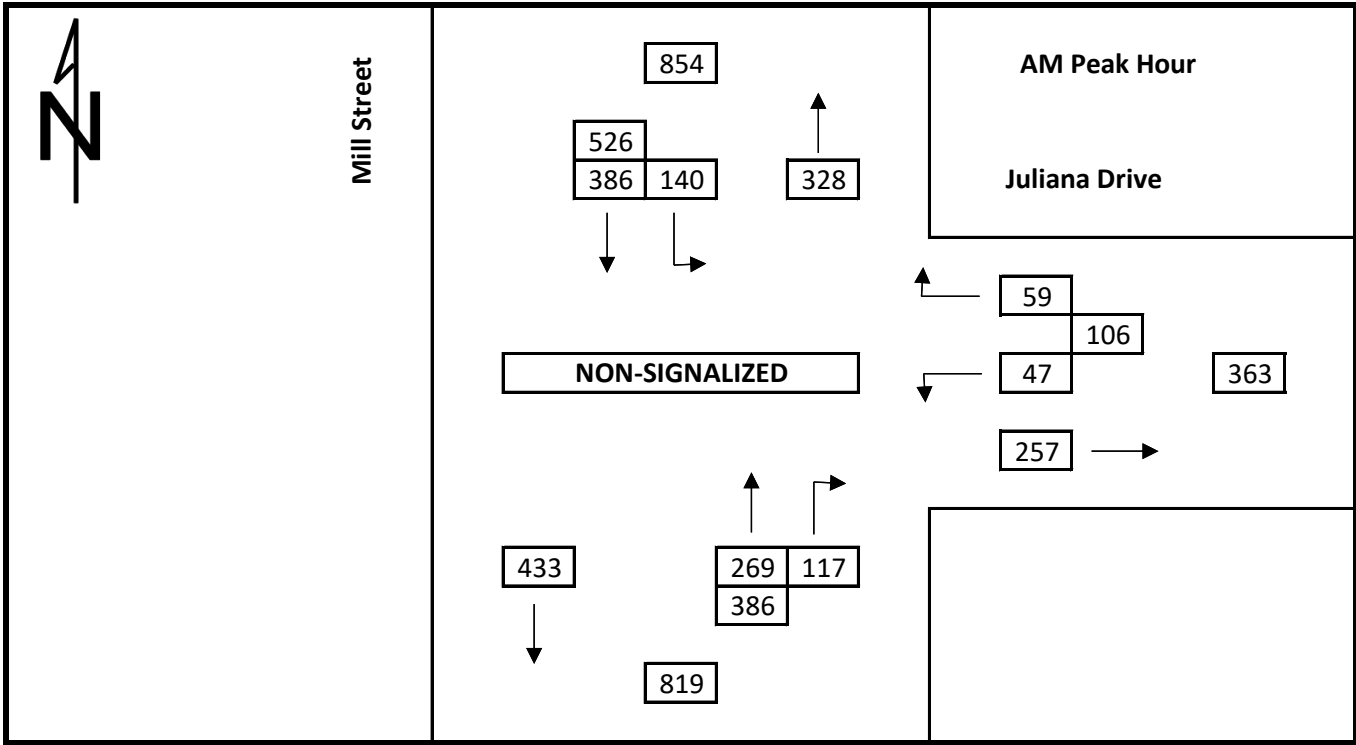
Lampman Place at Juliana Drive

Bruin Boulevard at Juliana Drive

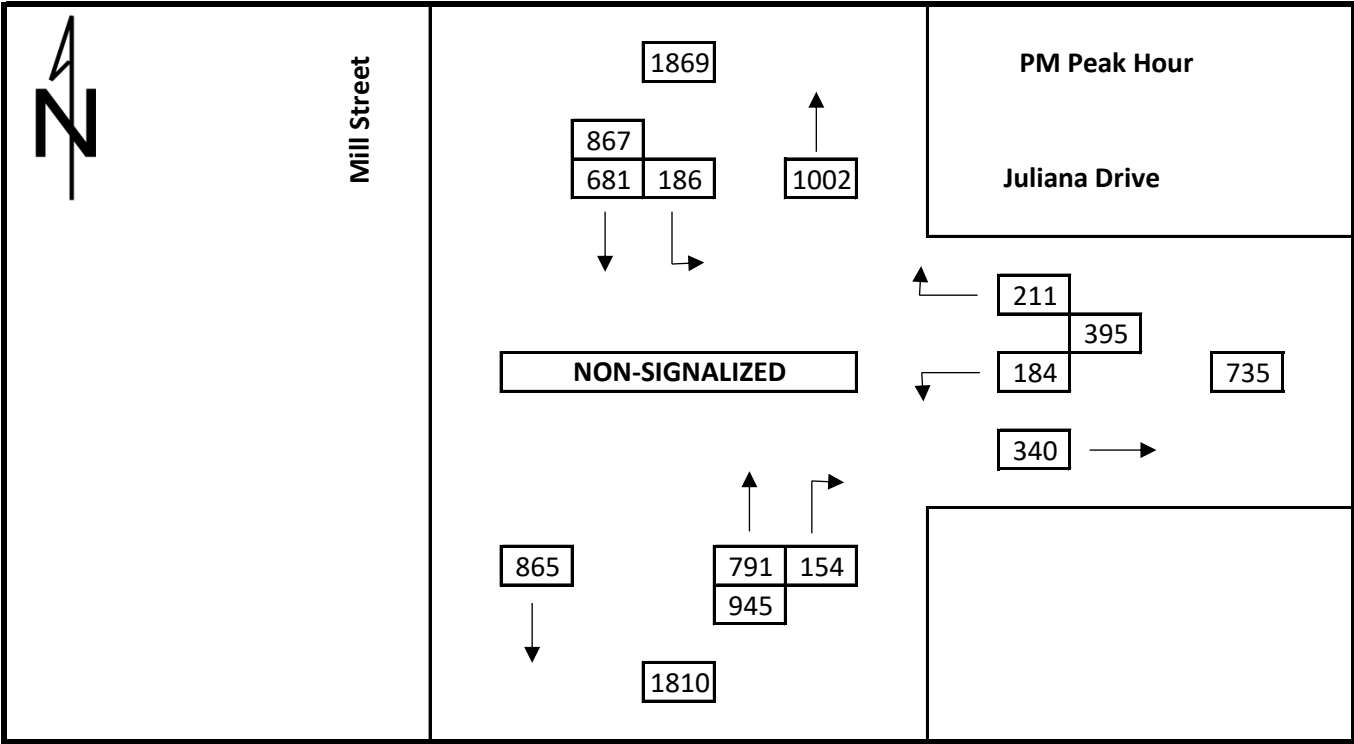
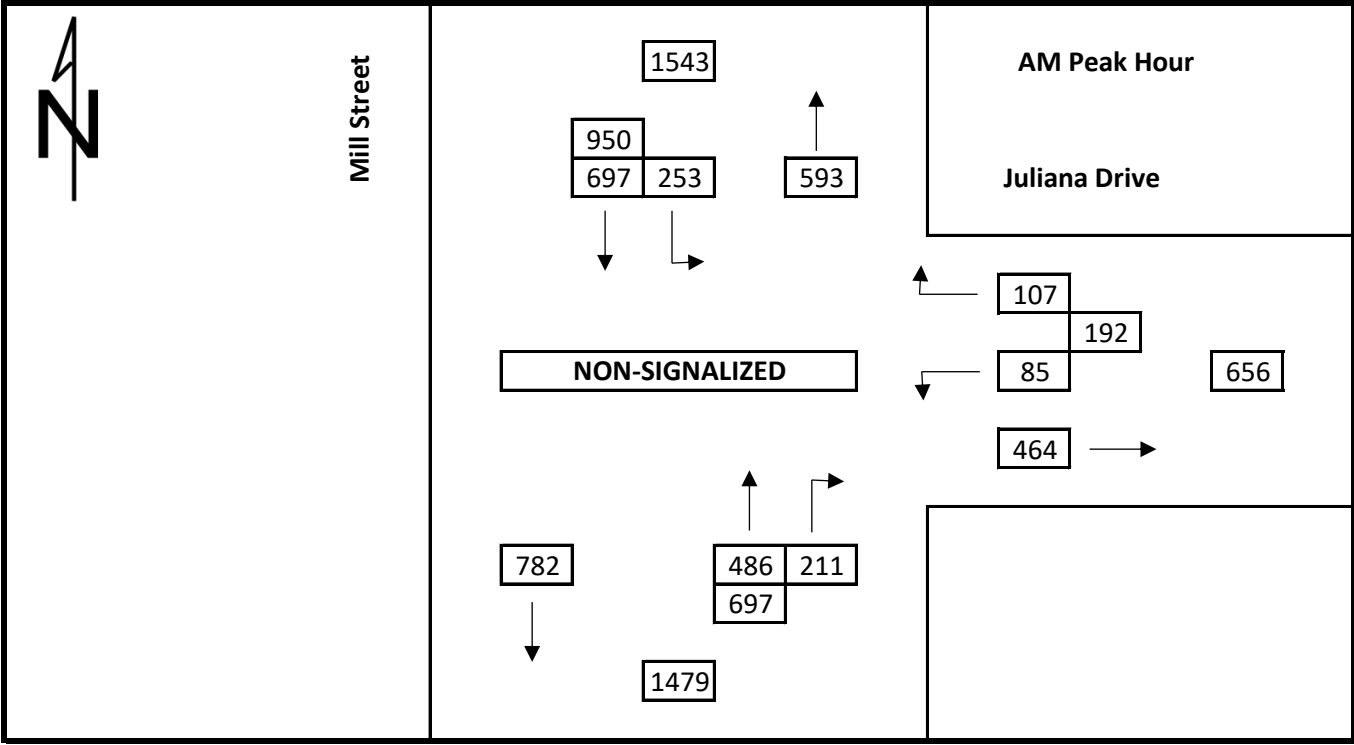
Norwich Avenue (CR 59) at Juliana Drive

Montclair Drive at Juliana Drive

Existing Traffic Counts
Mill Street at Juliana Drive

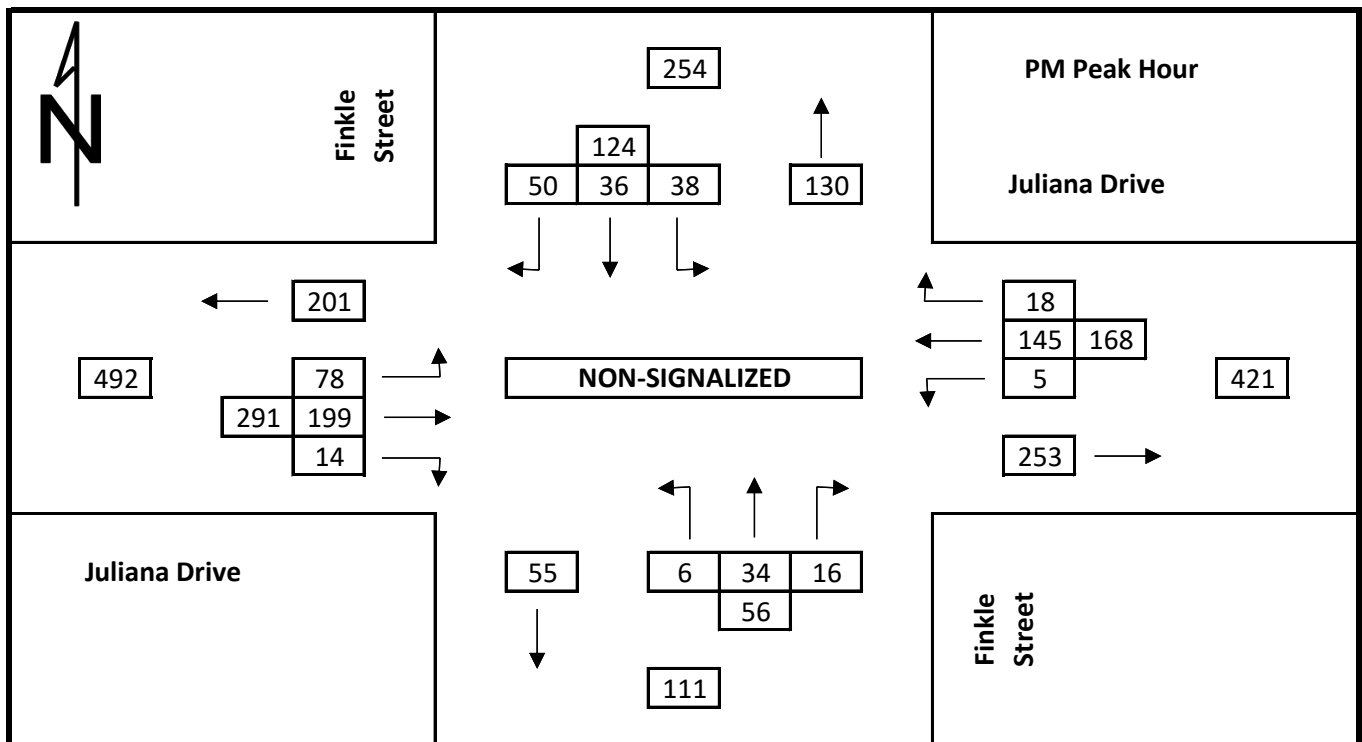
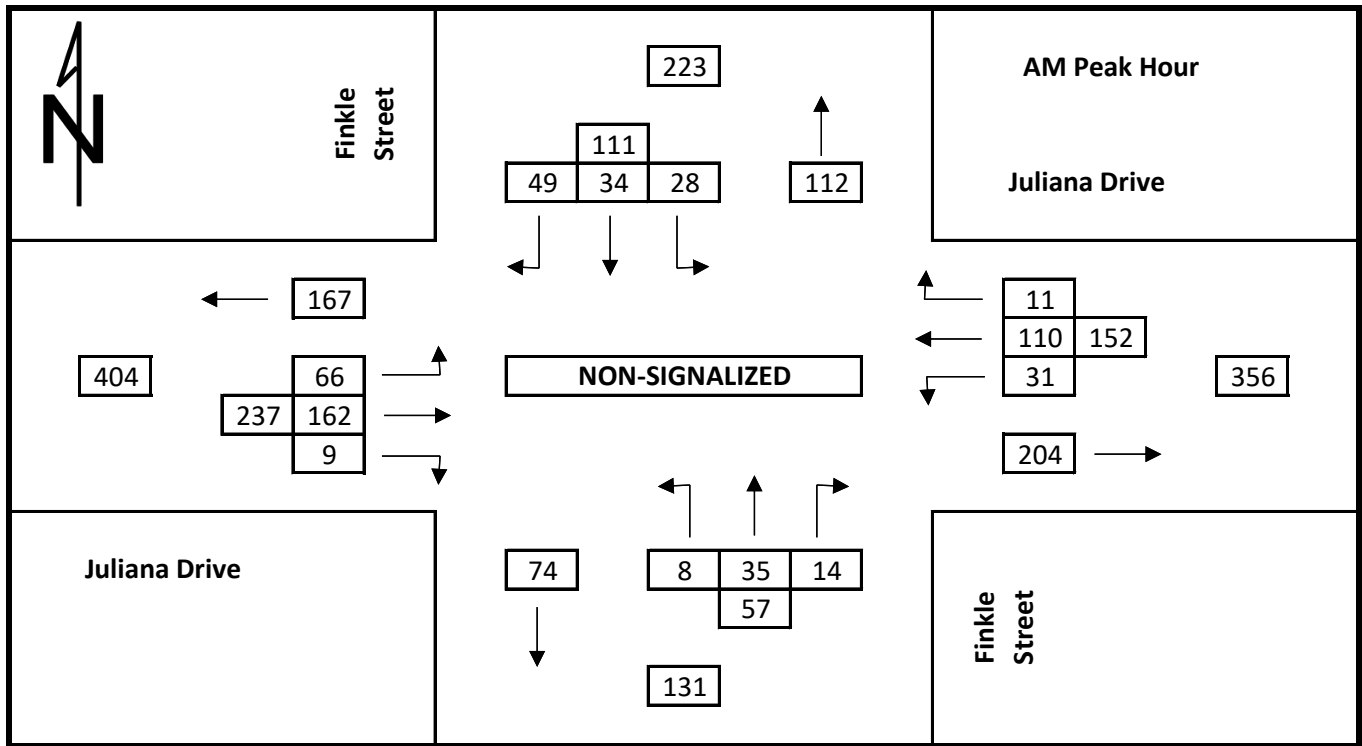


Total Traffic 2043
Mill Street at Juliana Drive

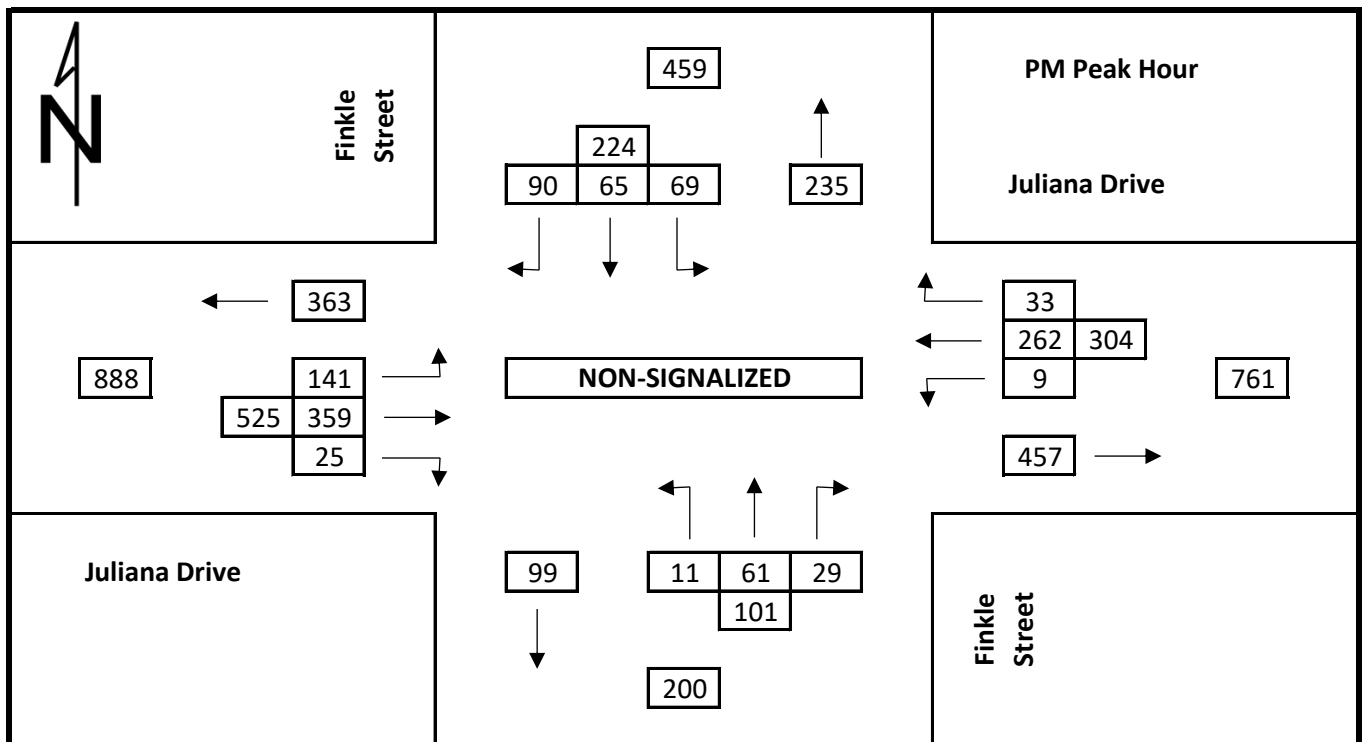
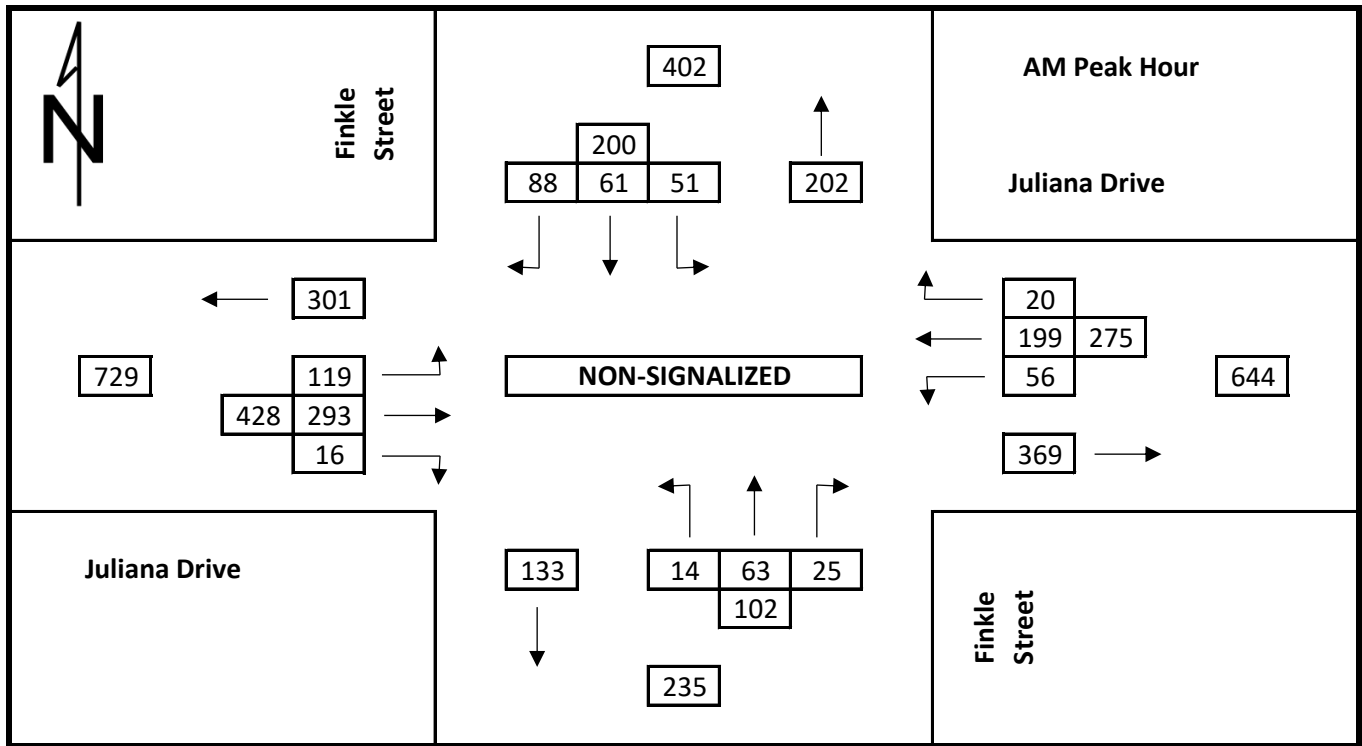


Existing Traffic Counts

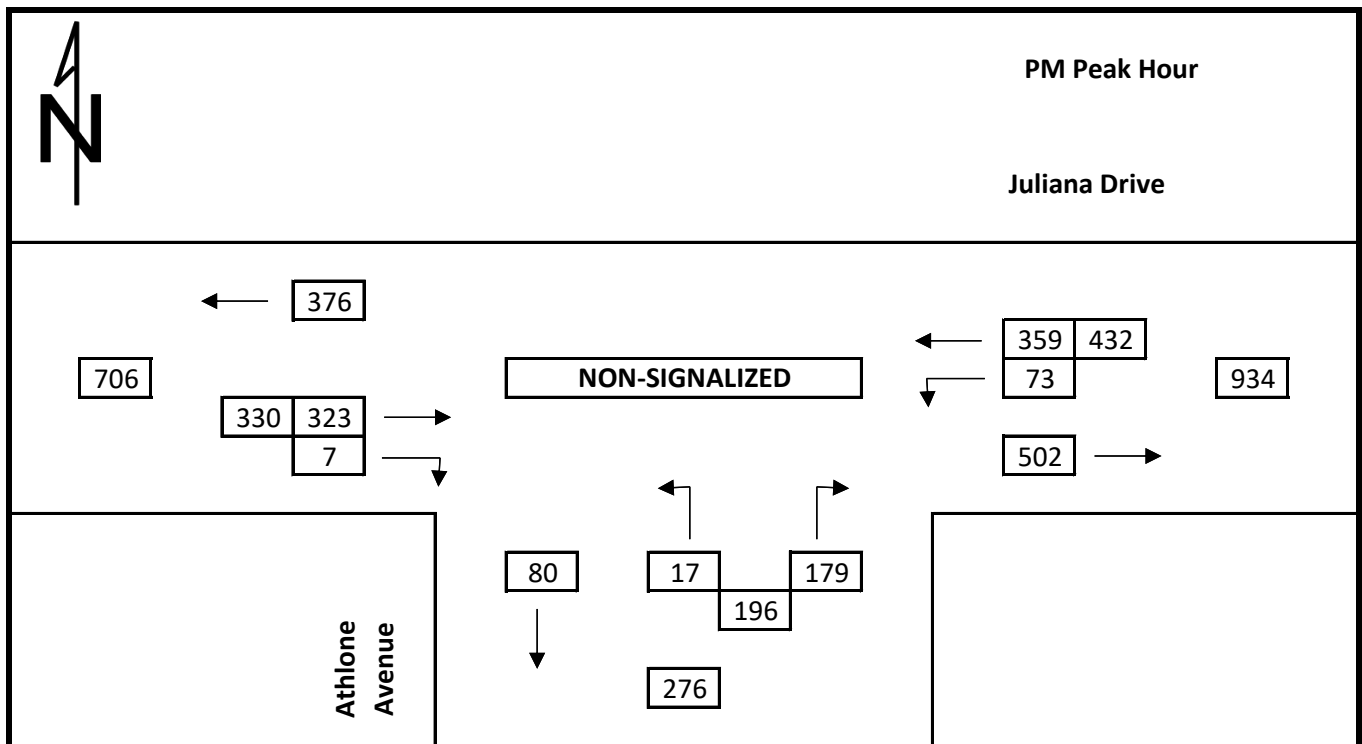
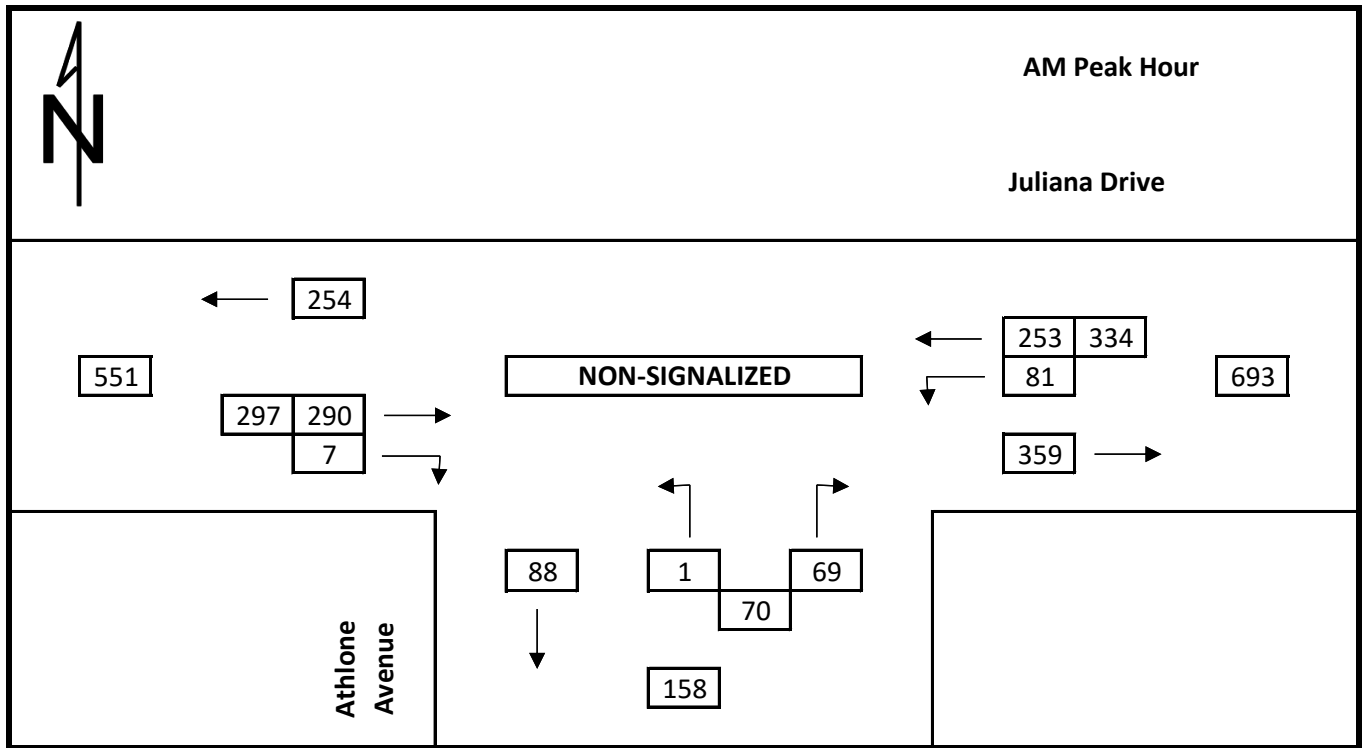
Finkle Street at Juliana Drive



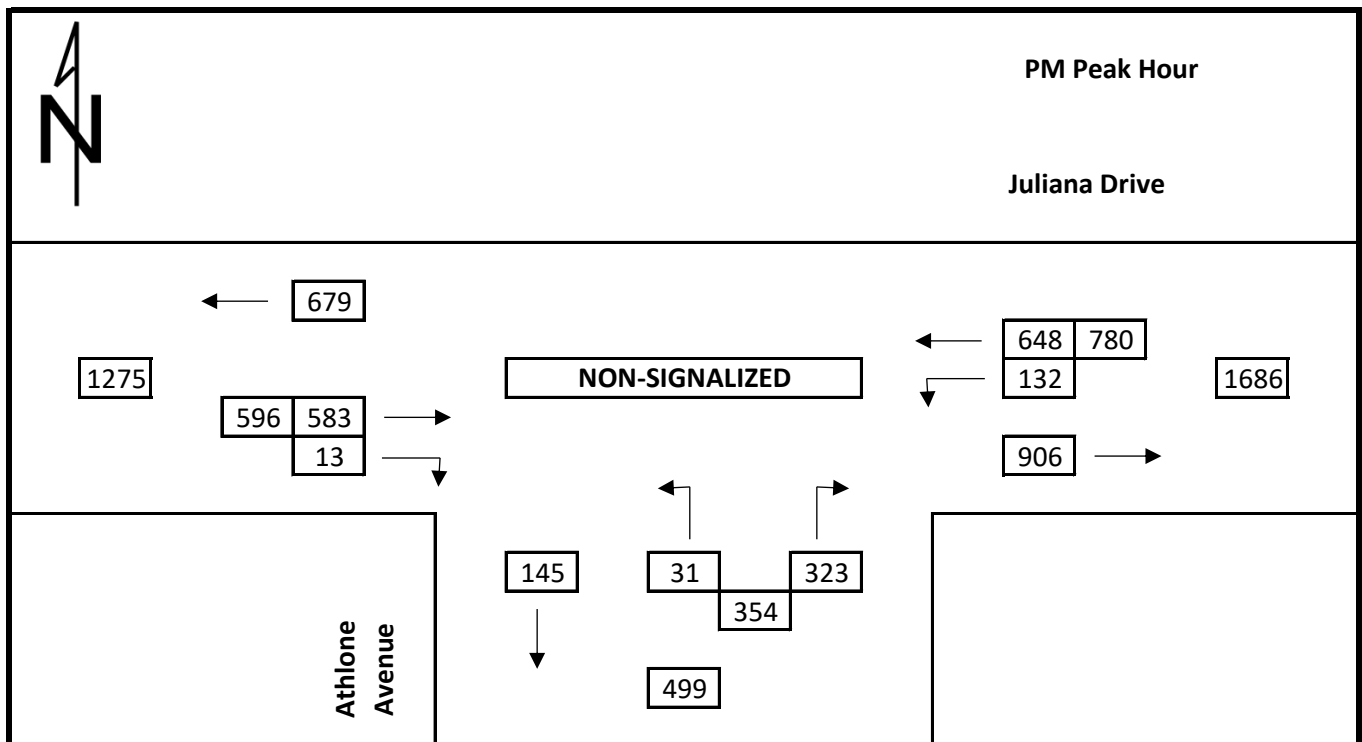
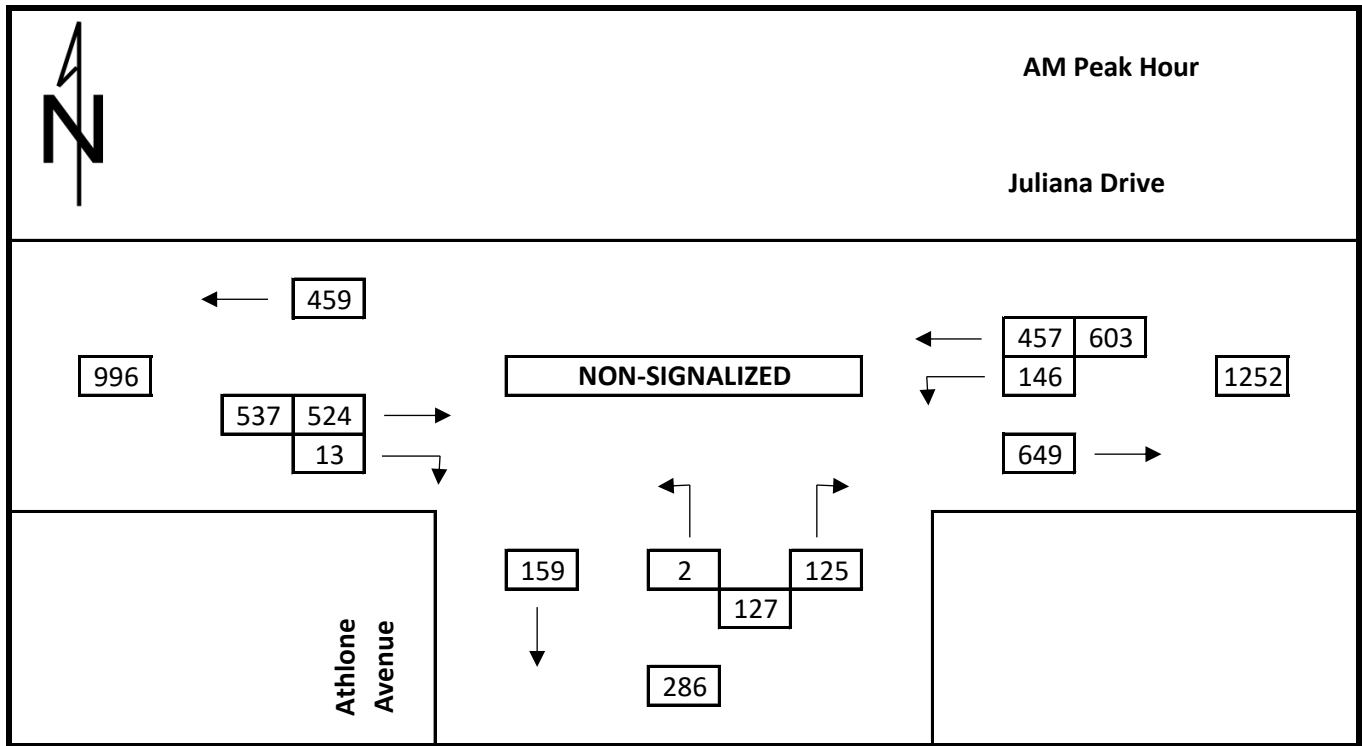
Total Traffic 2043
Finkle Street at Juliana Drive



Existing Traffic Counts
Athlone Avenue at Juliana Drive

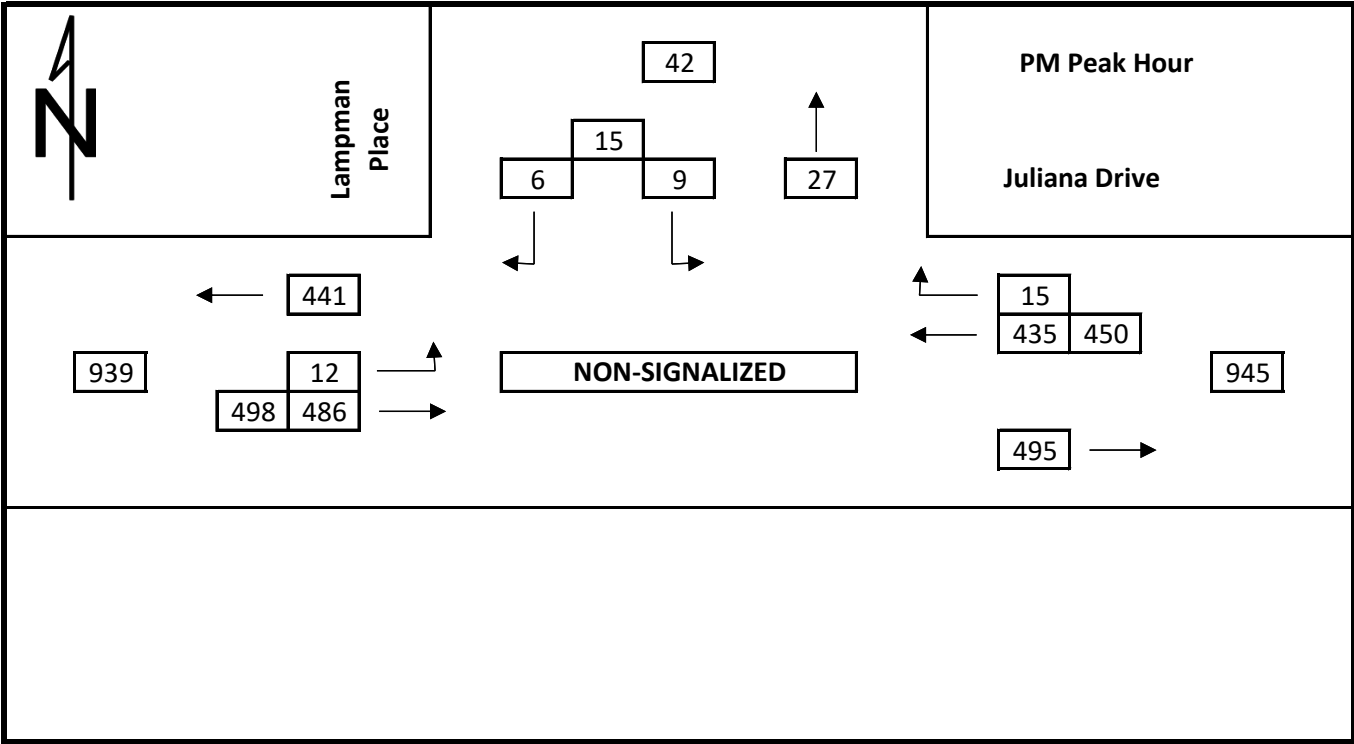
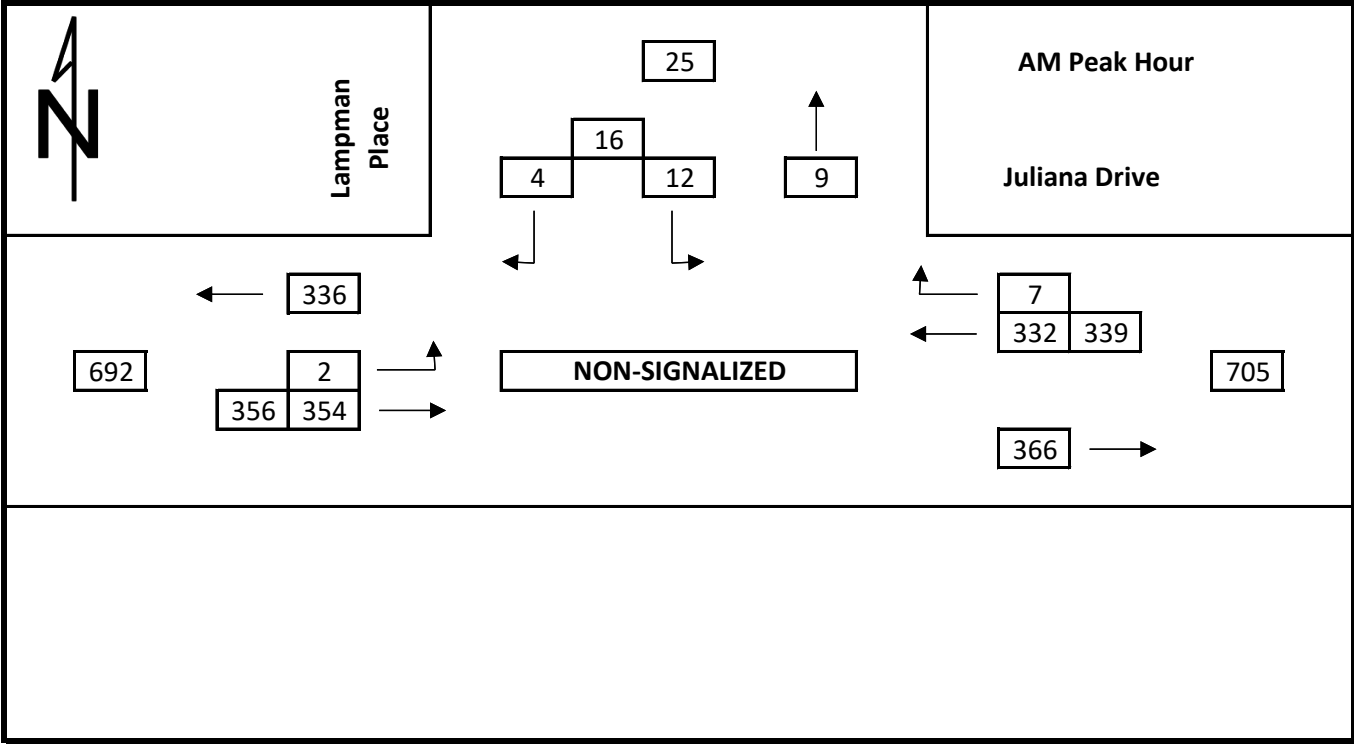


Total Traffic 2043
Athlone Avenue at Juliana Drive

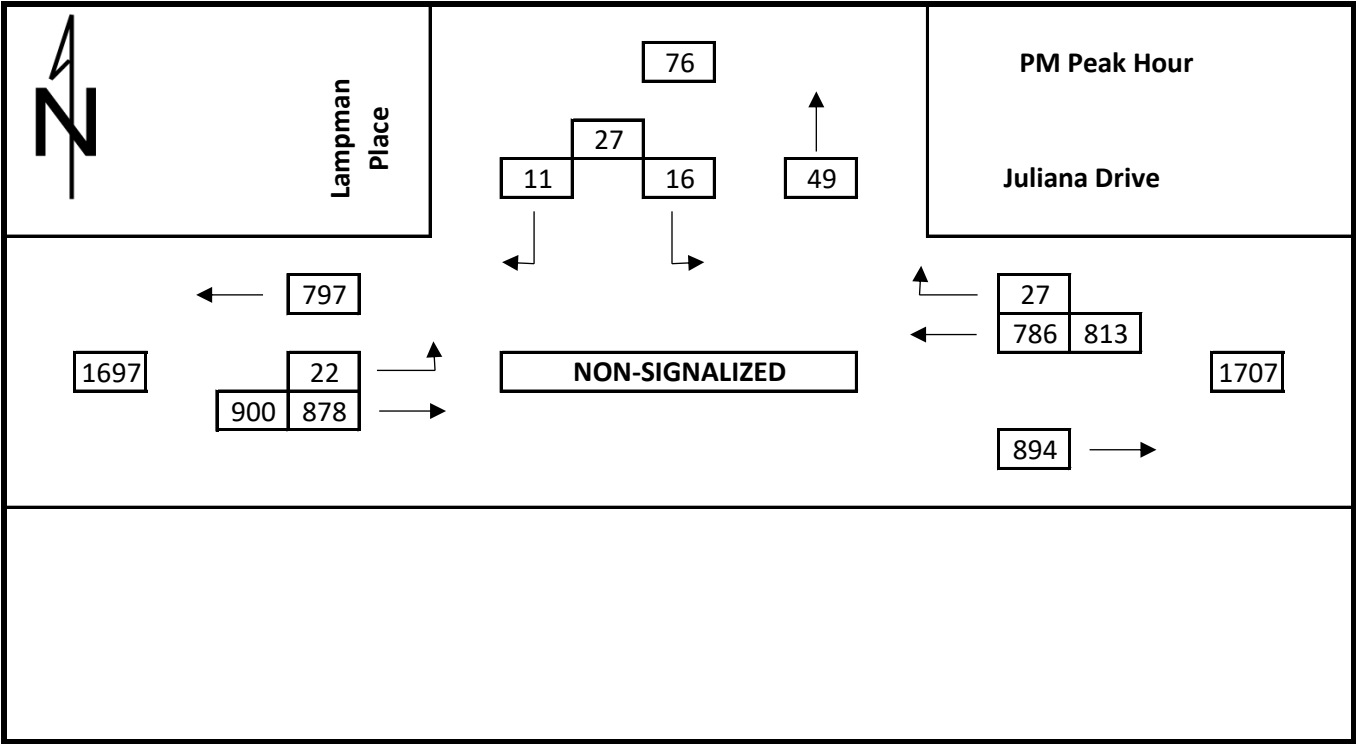
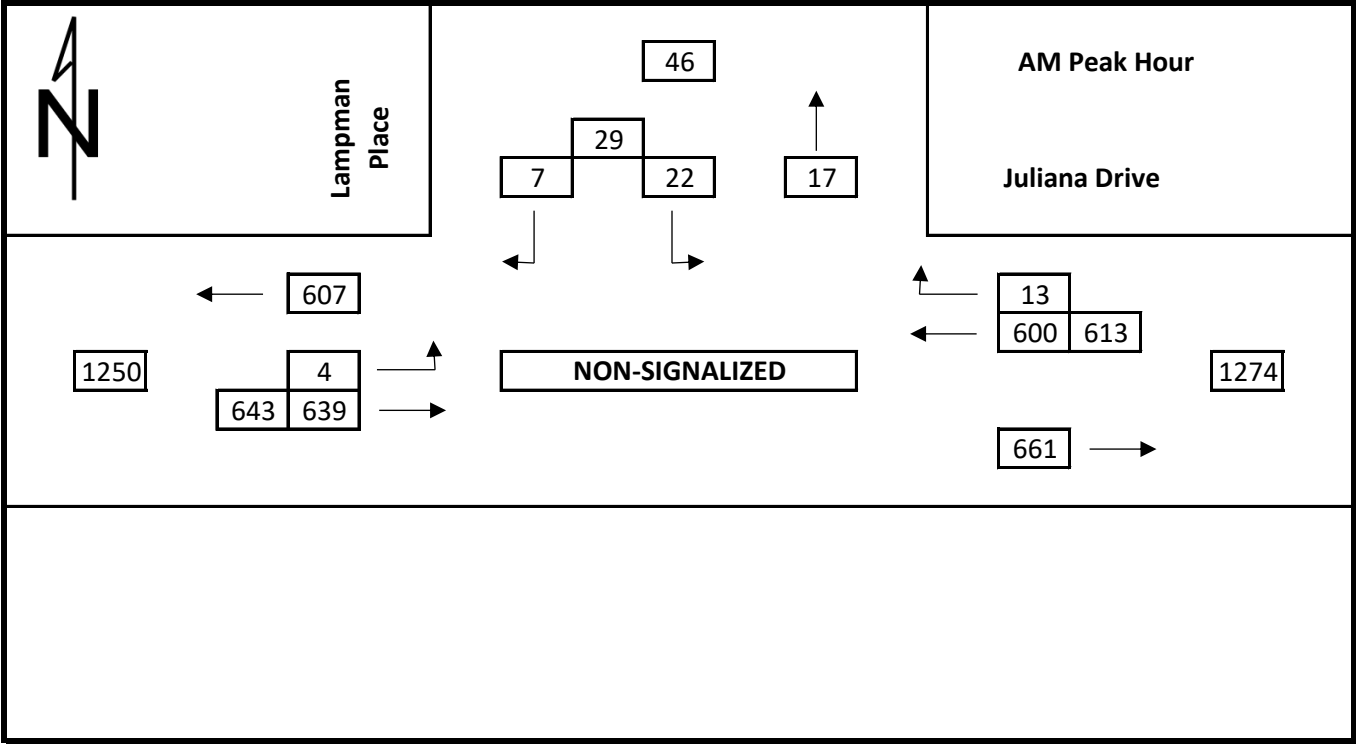


Existing Traffic Counts

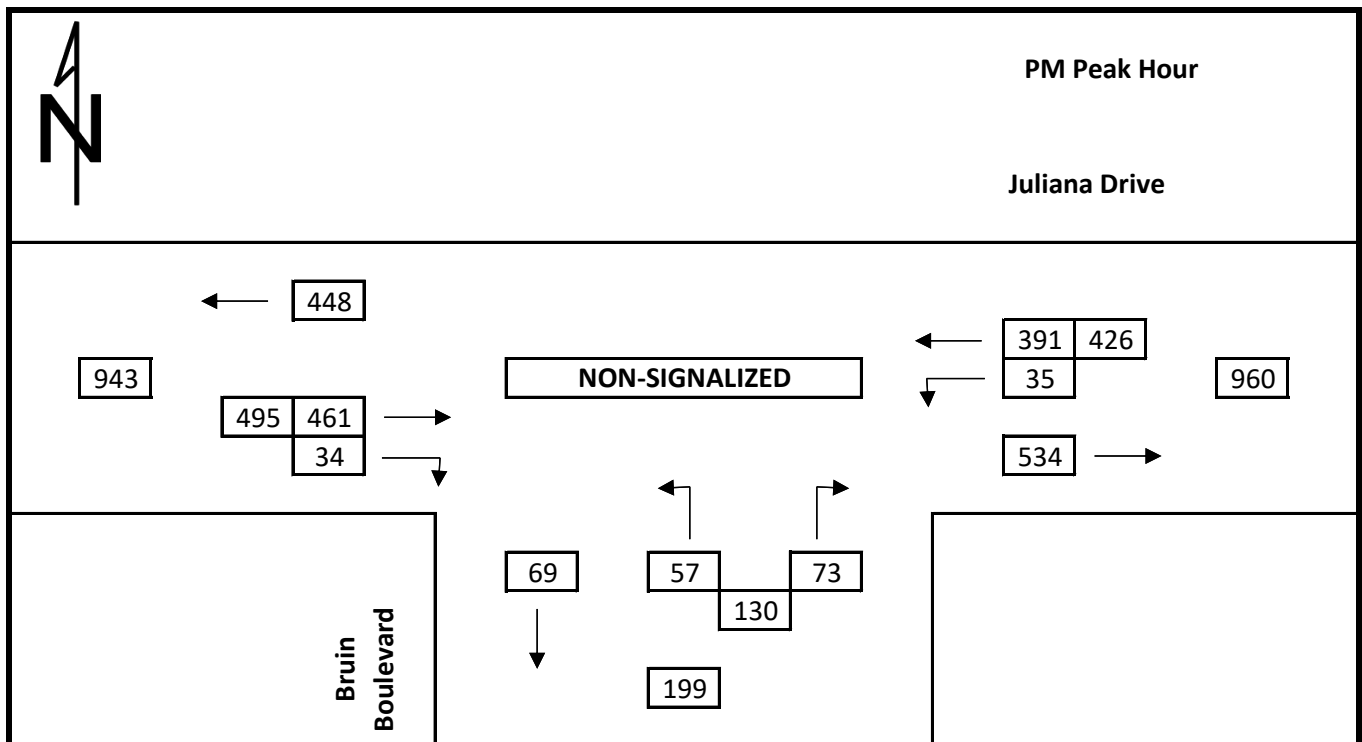
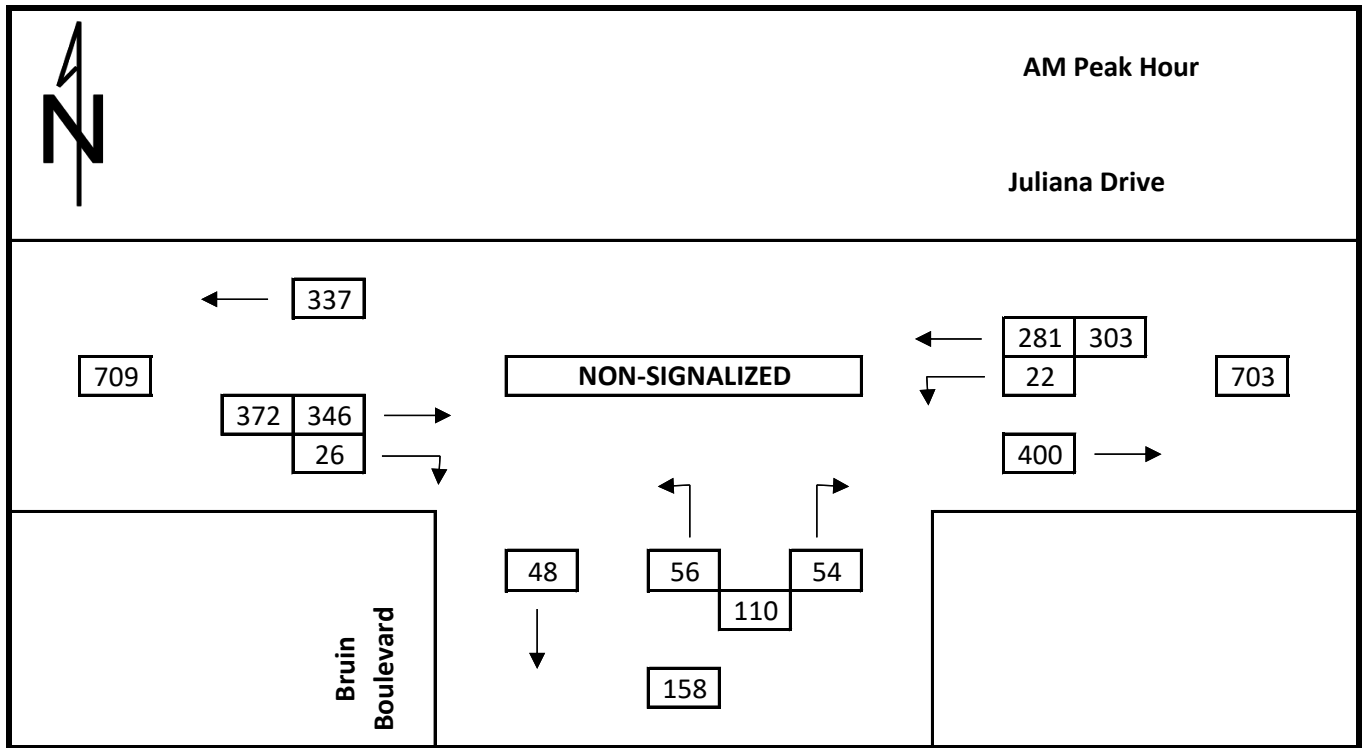
Lampman Place at Juliana Drive



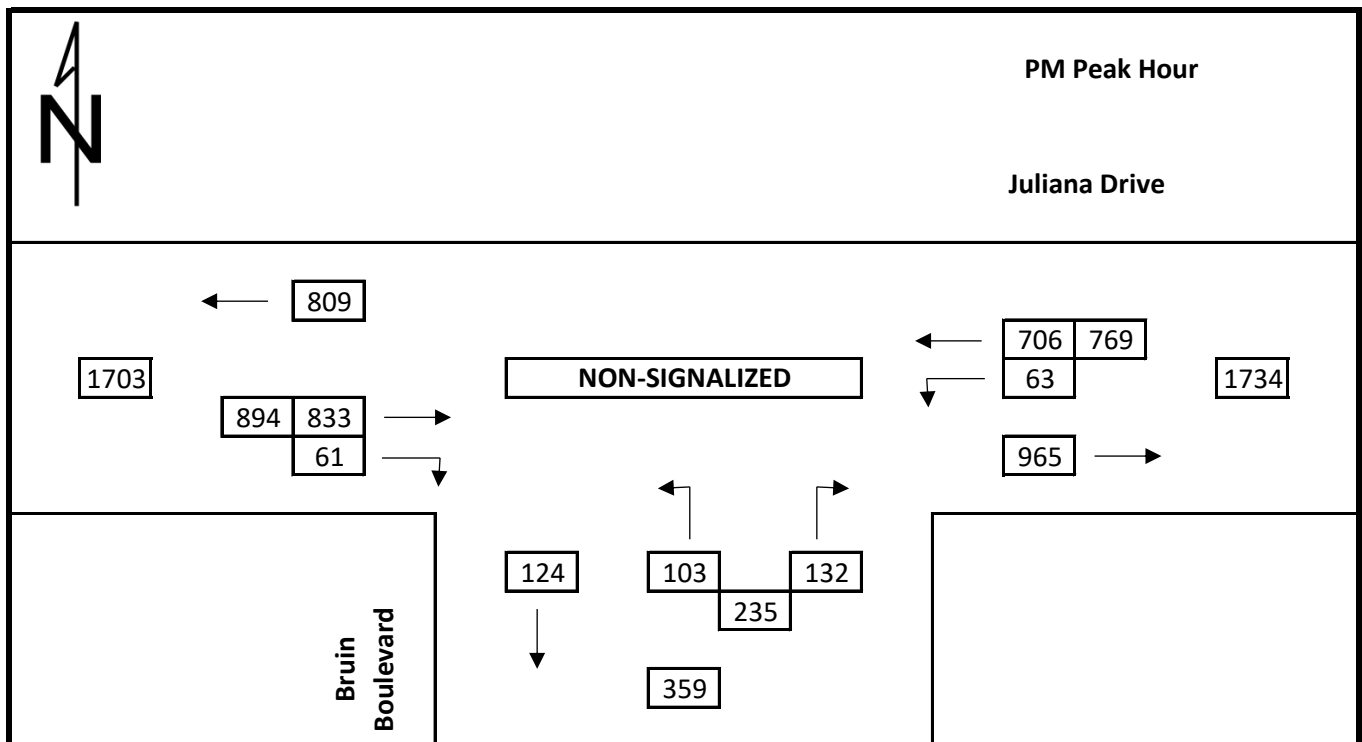
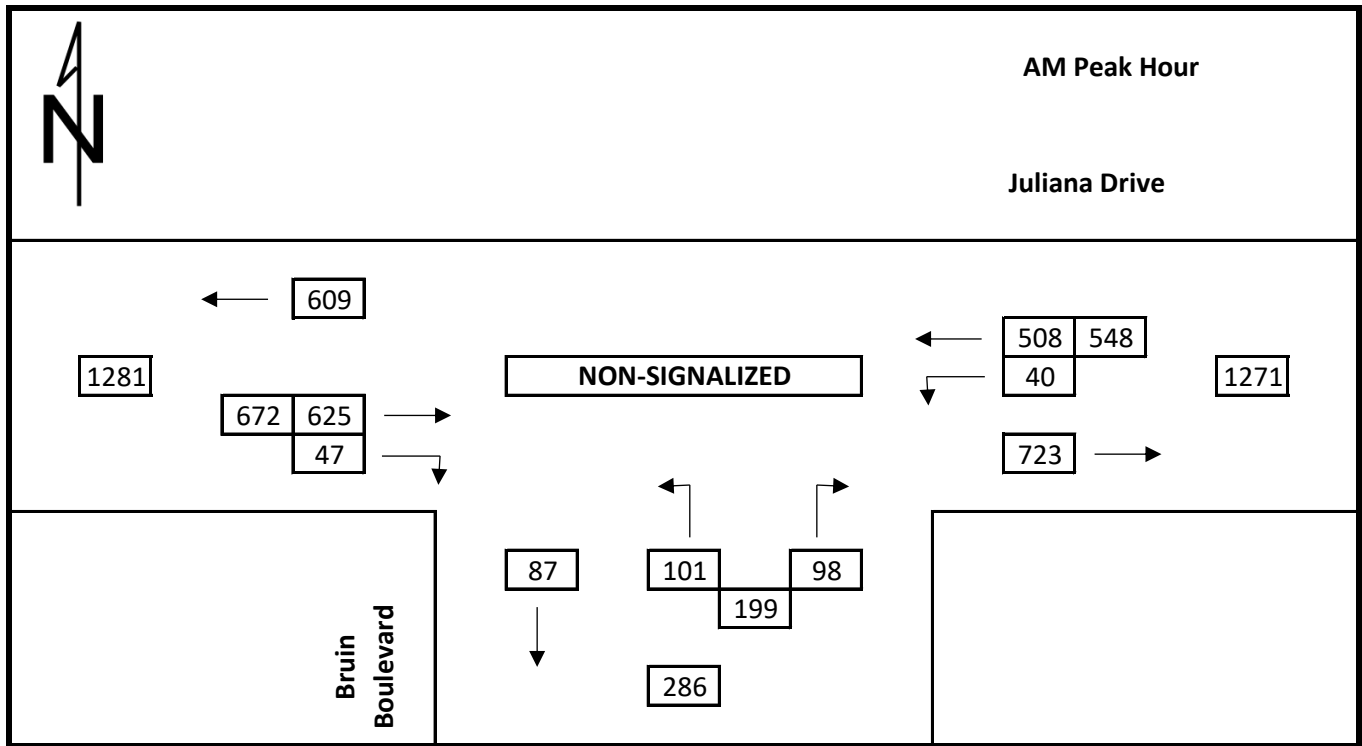
Total Traffic 2043
Lampman Place at Juliana Drive



Existing Traffic Counts
Bruin Boulevard at Juliana Drive

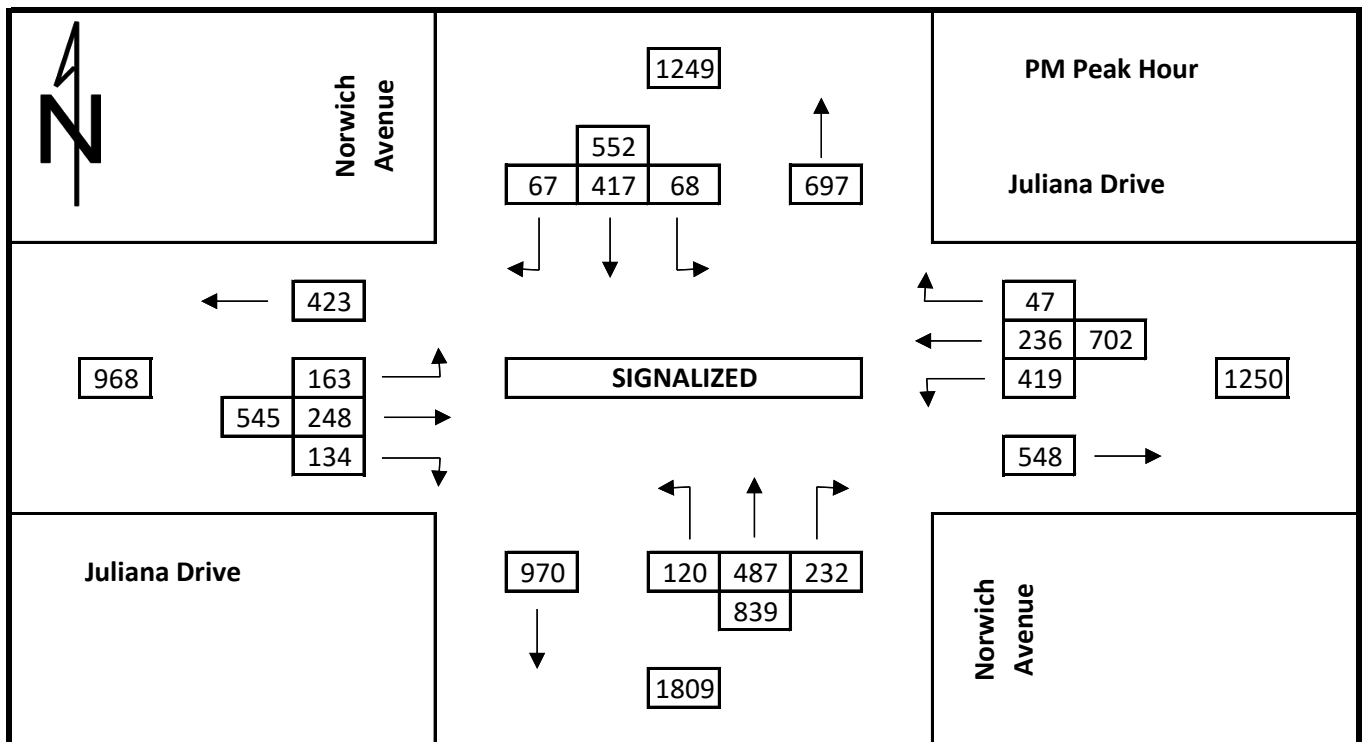
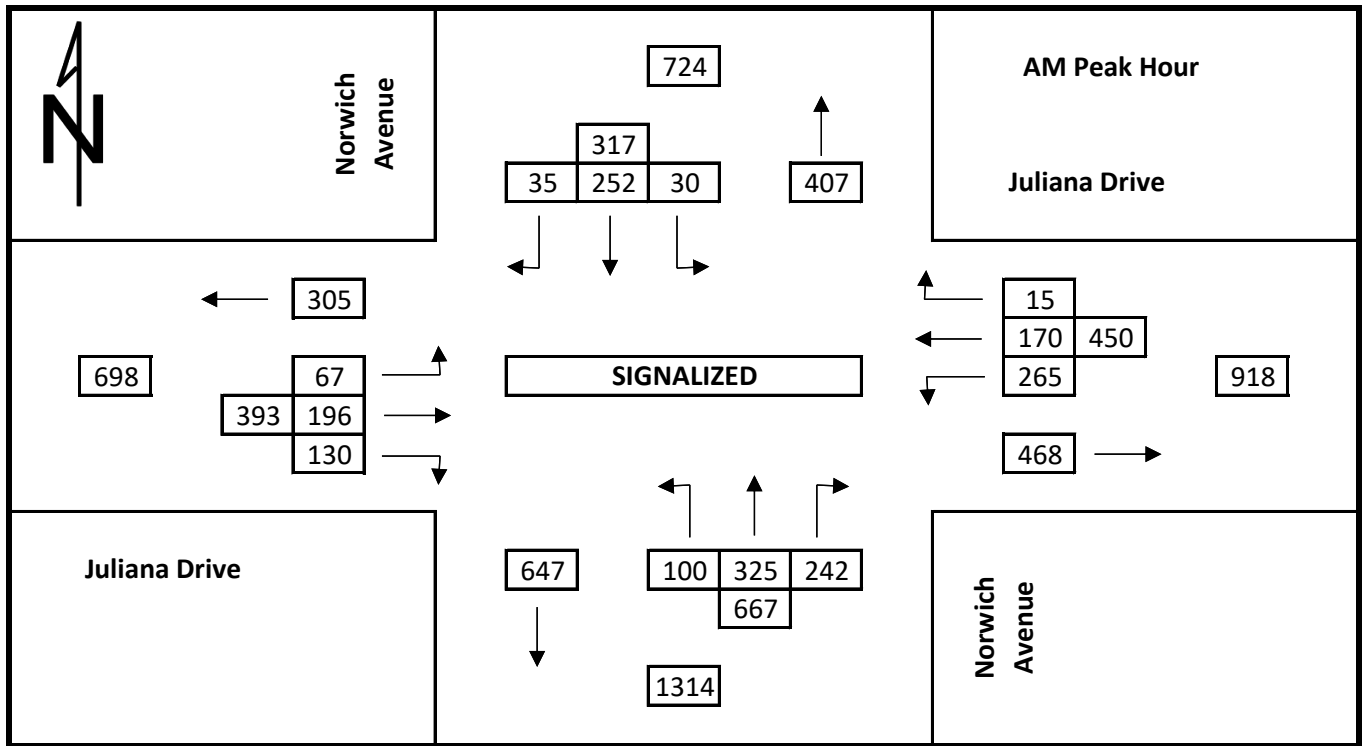


Total Traffic 2043
Bruin Boulevard at Juliana Drive

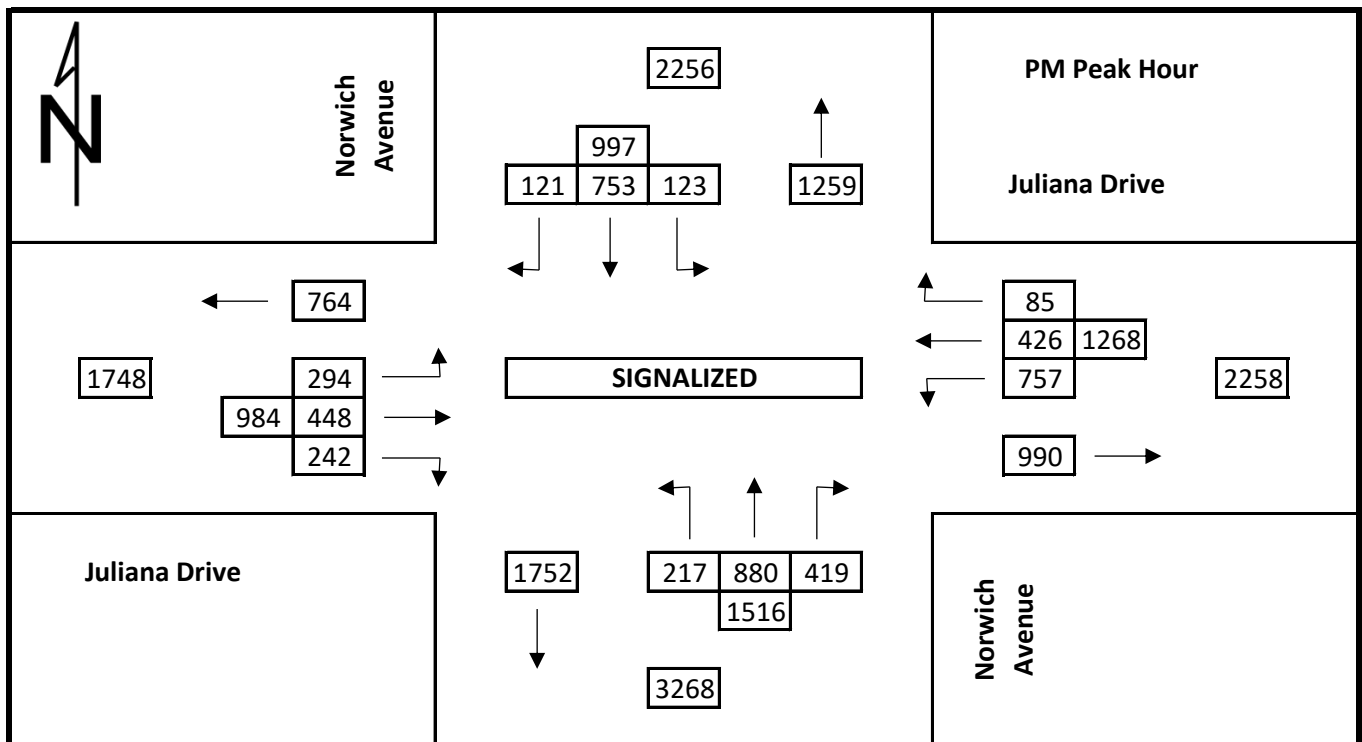
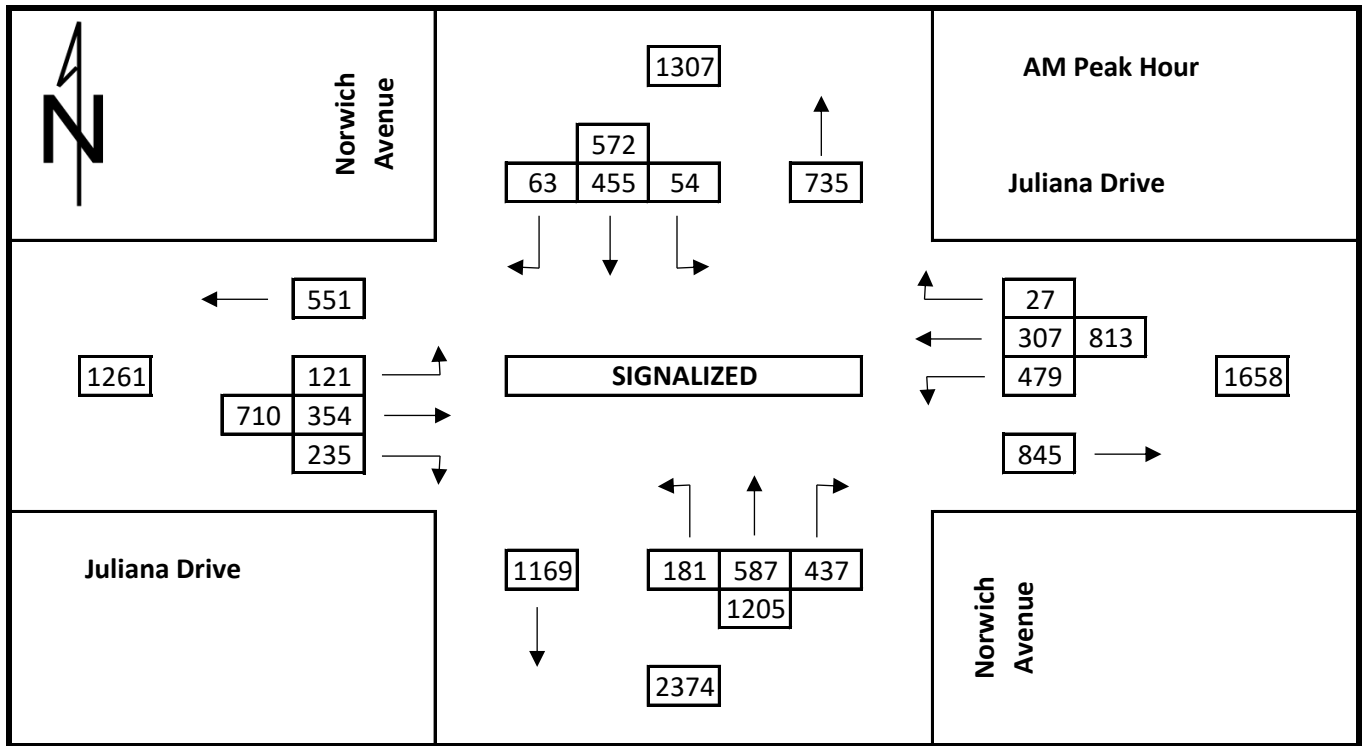


Existing Traffic Counts

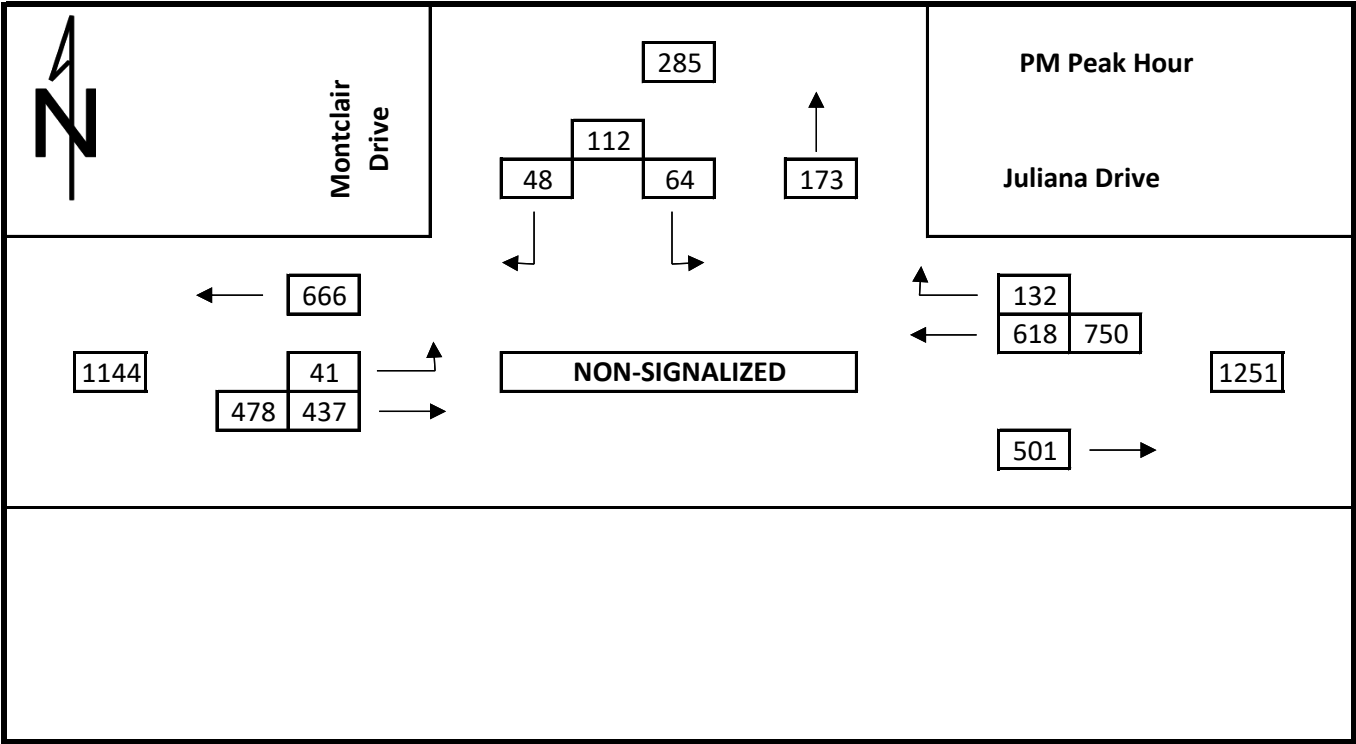
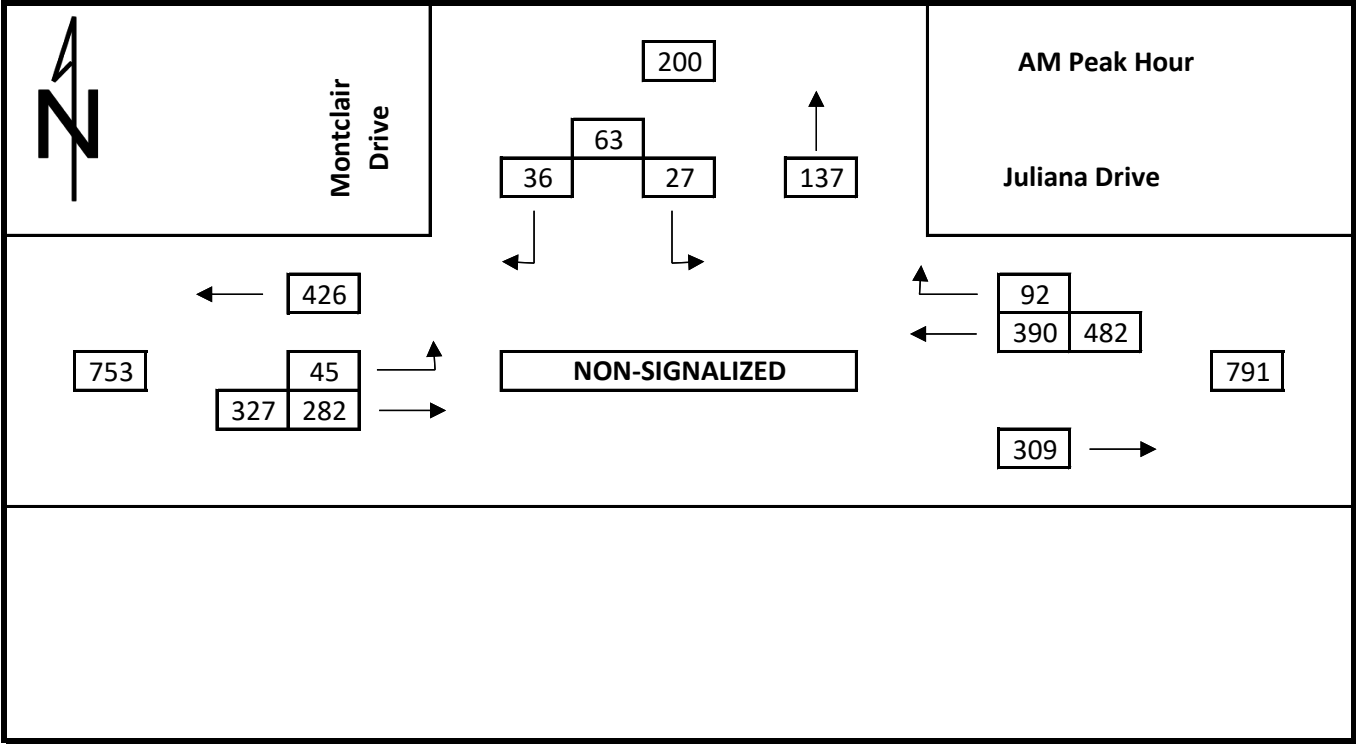
Norwich Avenue at Juliana Drive



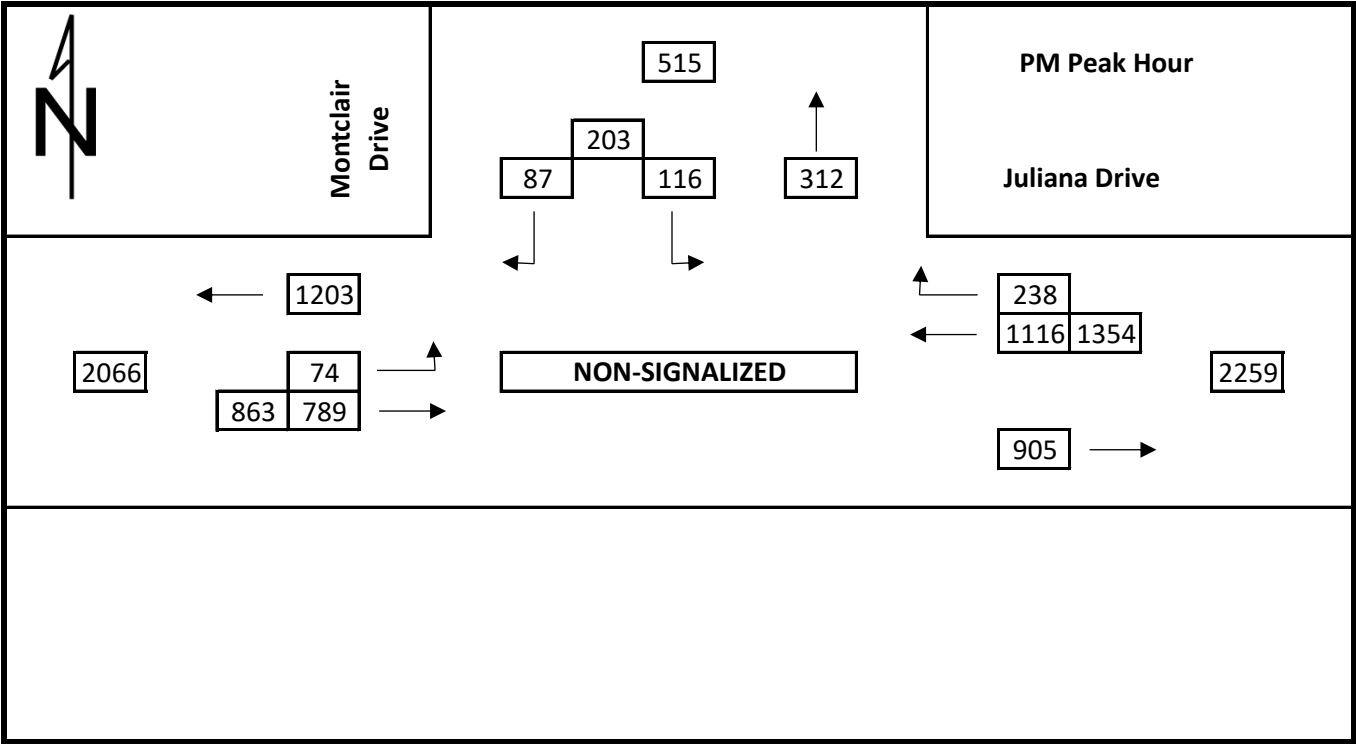
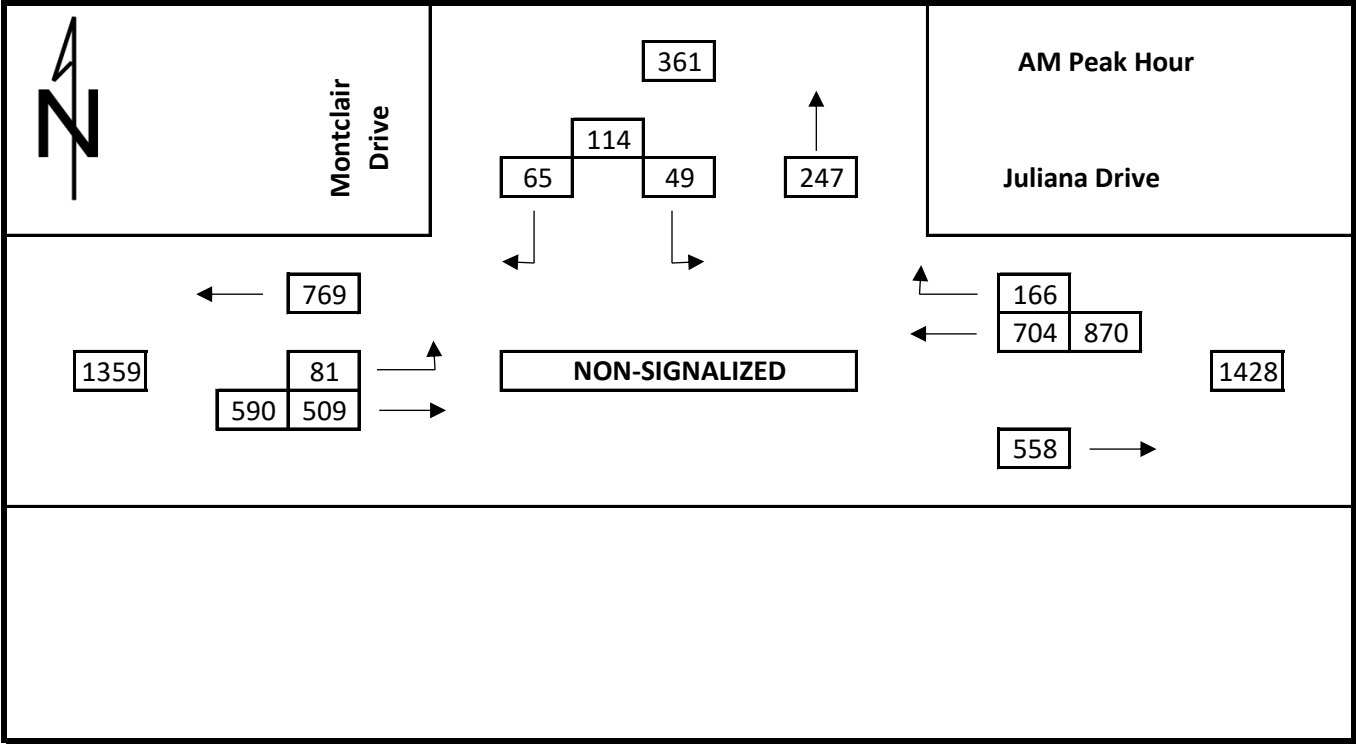
Total Traffic 2043
Norwich Avenue at Juliana Drive



Existing Traffic Counts
Montclair Drive at Juliana Drive



Total Traffic 2043
Montclair Drive at Juliana Drive



Appendix C

DETAILED SYNCHRO RESULTS EXISTING CONFIGURATION

Mill Street (CR 12) at Juliana Drive

Finkle Street at Juliana Drive

Athlone Avenue at Juliana Drive

Lampman Place at Juliana Drive

Bruin Boulevard at Juliana Drive

Norwich Avenue (CR 59) at Juliana Drive

Montclair Drive at Juliana Drive

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	59	269	117	140	386
Future Vol, veh/h	47	59	269	117	140	386
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	12	8	3	4	5
Mvmt Flow	51	64	292	127	152	420
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1016	292	0	0	419	0
Stage 1	292	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	6.53	6.32	-	-	4.14	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.408	-	-	2.236	-
Pot Cap-1 Maneuver	252	724	-	-	1129	-
Stage 1	733	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	218	724	-	-	1129	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.6	0	2.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 218 724 1129	-	-		
HCM Lane V/C Ratio	-	- 0.234 0.089 0.135	-	-		
HCM Control Delay (s)	-	- 26.5 10.5 8.7	-	-		
HCM Lane LOS	-	- D B A	-	-		
HCM 95th %tile Q(veh)	-	- 0.9 0.3 0.5	-	-		

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	117	438	85	103	377
Future Vol, veh/h	102	117	438	85	103	377
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	1	3	2	3	3
Mvmt Flow	111	127	476	92	112	410
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1110	476	0	0	568	0
Stage 1	476	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Critical Hdwy	6.42	6.21	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.309	-	-	2.227	-
Pot Cap-1 Maneuver	232	591	-	-	999	-
Stage 1	625	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	206	591	-	-	999	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	26	0	1.9			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 206 591	999	-		
HCM Lane V/C Ratio	-	- 0.538 0.215	0.112	-		
HCM Control Delay (s)	-	- 41.2 12.8	9.1	-		
HCM Lane LOS	-	- E B	A	-		
HCM 95th %tile Q(veh)	-	- 2.8 0.8	0.4	-		

Mill Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	26.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	107	486	211	253	697
Future Vol, veh/h	85	107	486	211	253	697
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	12	8	3	4	5
Mvmt Flow	92	116	528	229	275	758
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1836	528	0	0	757	0
Stage 1	528	-	-	-	-	-
Stage 2	1308	-	-	-	-	-
Critical Hdwy	6.53	6.32	-	-	4.14	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.408	-	-	2.236	-
Pot Cap-1 Maneuver	~ 78	531	-	-	845	-
Stage 1	570	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	531	-	-	845	-
Mov Cap-2 Maneuver	~ 53	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	240.1	0		3		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	53	531	845	-
HCM Lane V/C Ratio	-	-	1.743	0.219	0.325	-
HCM Control Delay (s)	-	-	\$ 525.2	13.7	11.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	8.8	0.8	1.4	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Mill Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	157.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	184	211	791	154	186	681
Future Vol, veh/h	184	211	791	154	186	681
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	12	8	3	4	5
Mvmt Flow	200	229	860	167	202	740
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2004	860	0	0	1027	0
Stage 1	860	-	-	-	-	-
Stage 2	1144	-	-	-	-	-
Critical Hdwy	6.53	6.32	-	-	4.14	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.408	-	-	2.236	-
Pot Cap-1 Maneuver	~ 61	341	-	-	668	-
Stage 1	397	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 43	341	-	-	668	-
Mov Cap-2 Maneuver	~ 43	-	-	-	-	-
Stage 1	397	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	\$ 872	0		2.7		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	43	341	668	-
HCM Lane V/C Ratio	-	-	4.651	0.673	0.303	-
HCM Control Delay (s)	-	\$	1832.2	34.7	12.7	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	22.9	4.6	1.3	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	162	9	31	110	11	8	35	14	28	34	49
Future Vol, veh/h	66	162	9	31	110	11	8	35	14	28	34	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	5	0	3	9	9	25	9	0	0	6	6
Mvmt Flow	72	176	10	34	120	12	9	38	15	30	37	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	9	9	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	28%	20%	25%
Vol Thru, %	61%	68%	72%	31%
Vol Right, %	25%	4%	7%	44%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	237	152	111
LT Vol	8	66	31	28
Through Vol	35	162	110	34
RT Vol	14	9	11	49
Lane Flow Rate	62	258	165	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.328	0.216	0.159
Departure Headway (Hd)	5.347	4.581	4.699	4.752
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	667	783	762	750
Service Time	3.407	2.621	2.744	2.805
HCM Lane V/C Ratio	0.093	0.33	0.217	0.161
HCM Control Delay	9	9.9	9	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	1.4	0.8	0.6

Juliana Drive at Finkle Street
Woodstock, ON.

Existing Traffic PM Peak Hour
Existing Geometric Configuration

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	78	199	14	5	145	18	6	34	16	38	36	50
Future Vol, veh/h	78	199	14	5	145	18	6	34	16	38	36	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	4	14	0	3	0	17	9	0	0	8	4
Mvmt Flow	85	216	15	5	158	20	7	37	17	41	39	54
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	9.3	9	9.2
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	27%	3%	31%
Vol Thru, %	61%	68%	86%	29%
Vol Right, %	29%	5%	11%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	291	168	124
LT Vol	6	78	5	38
Through Vol	34	199	145	36
RT Vol	16	14	18	50
Lane Flow Rate	61	316	183	135
Geometry Grp	1	1	1	1
Degree of Util (X)	0.091	0.407	0.239	0.186
Departure Headway (Hd)	5.385	4.636	4.708	4.957
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	660	772	758	718
Service Time	3.465	2.688	2.767	3.026
HCM Lane V/C Ratio	0.092	0.409	0.241	0.188
HCM Control Delay	9	10.9	9.3	9.2
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	2	0.9	0.7

Finkle Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	119	293	16	56	199	20	14	63	25	51	61	88
Future Vol, veh/h	119	293	16	56	199	20	14	63	25	51	61	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	5	0	3	9	9	25	9	0	0	6	6
Mvmt Flow	129	318	17	61	216	22	15	68	27	55	66	96
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	21	14.1	11.8	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	28%	20%	26%
Vol Thru, %	62%	68%	72%	30%
Vol Right, %	25%	4%	7%	44%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	428	275	200
LT Vol	14	119	56	51
Through Vol	63	293	199	61
RT Vol	25	16	20	88
Lane Flow Rate	111	465	299	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.213	0.709	0.478	0.37
Departure Headway (Hd)	6.915	5.484	5.862	6.132
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	521	651	619	591
Service Time	4.926	3.578	3.862	4.132
HCM Lane V/C Ratio	0.213	0.714	0.483	0.367
HCM Control Delay	11.8	21	14.1	12.7
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.8	5.9	2.6	1.7

Finkle Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

Intersection	
Intersection Delay, s/veh	29
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	141	359	25	9	262	33	11	61	29	69	65	90
Future Vol, veh/h	141	359	25	9	262	33	11	61	29	69	65	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	5	0	3	9	9	25	9	0	0	6	6
Mvmt Flow	153	390	27	10	285	36	12	66	32	75	71	98
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	44.7	17.4	12.9	15.2
HCM LOS	E	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	27%	3%	31%
Vol Thru, %	60%	68%	86%	29%
Vol Right, %	29%	5%	11%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	525	304	224
LT Vol	11	141	9	69
Through Vol	61	359	262	65
RT Vol	29	25	33	90
Lane Flow Rate	110	571	330	243
Geometry Grp	1	1	1	1
Degree of Util (X)	0.231	0.927	0.572	0.452
Departure Headway (Hd)	7.576	5.847	6.237	6.683
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	472	616	575	538
Service Time	5.657	3.896	4.299	4.748
HCM Lane V/C Ratio	0.233	0.927	0.574	0.452
HCM Control Delay	12.9	44.7	17.4	15.2
HCM Lane LOS	B	E	C	C
HCM 95th-tile Q	0.9	12	3.6	2.3

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	290	7	81	253	1	69
Future Vol, veh/h	290	7	81	253	1	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	6	6	0	12
Mvmt Flow	315	8	88	275	1	75
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	323	0	770	319
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	-	-	4.16	-	6.4	6.32
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.254	-	3.5	3.408
Pot Cap-1 Maneuver	-	-	1215	-	372	699
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1215	-	345	699
Mov Cap-2 Maneuver	-	-	-	-	345	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	599	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2		10.9	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	345	699	-	-	1215	-
HCM Lane V/C Ratio	0.003	0.107	-	-	0.072	-
HCM Control Delay (s)	15.5	10.8	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile O(veh)	0	0.4	-	-	0.2	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	323	7	73	359	17	179
Future Vol, veh/h	323	7	73	359	17	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	14	10	1	0	6
Mvmt Flow	351	8	79	390	18	195
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	359	0	903	355
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	548	-
Critical Hdwy	-	-	4.2	-	6.4	6.26
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.354
Pot Cap-1 Maneuver	-	-	1157	-	310	680
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1157	-	289	680
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	543	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.4	12.9			
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	289	680	-	-	1157	-
HCM Lane V/C Ratio	0.064	0.286	-	-	0.069	-
HCM Control Delay (s)	18.3	12.4	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	1.2	-	-	0.2	-

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	13	146	457	2	125
Future Vol, veh/h	524	13	146	457	2	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	6	6	0	12
Mvmt Flow	570	14	159	497	2	136
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	584	0	1392	577
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	-	-	4.16	-	6.4	6.32
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.254	-	3.5	3.408
Pot Cap-1 Maneuver	-	-	971	-	158	498
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	971	-	132	498
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	367	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.3		15.2	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	132	498	-	-	971	-
HCM Lane V/C Ratio	0.016	0.273	-	-	0.163	-
HCM Control Delay (s)	32.7	14.9	-	-	9.4	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	1.1	-	-	0.6	-

Intersection						
Int Delay, s/veh	8.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	583	13	132	648	31	323
Future Vol, veh/h	583	13	132	648	31	323
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	6	6	0	12
Mvmt Flow	634	14	143	704	34	351
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	648	0	1631	641
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	990	-
Critical Hdwy	-	-	4.16	-	6.4	6.32
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.254	-	3.5	3.408
Pot Cap-1 Maneuver	-	-	919	-	113	457
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	363	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	919	-	95	457
Mov Cap-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	306	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.6		36.9	
HCM LOS	E					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	95	457	-	-	919	-
HCM Lane V/C Ratio	0.355	0.768	-	-	0.156	-
HCM Control Delay (s)	62.4	34.5	-	-	9.6	-
HCM Lane LOS	F	D	-	-	A	-
HCM 95th %tile O(veh)	1.4	6.6	-	-	0.6	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	354	332	7	12	4
Future Vol, veh/h	2	354	332	7	12	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	6	0	0
Mvmt Flow	2	385	361	8	13	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	369	0	-	0	754	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	389	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1201	-	-	-	380	685
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	689	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1201	-	-	-	379	685
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	689	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		13.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1201	-	-	-	379	685
HCM Lane V/C Ratio	0.002	-	-	-	0.034	0.006
HCM Control Delay (s)	8	0	-	-	14.8	10.3
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	486	435	15	9	6
Future Vol, veh/h	12	486	435	15	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	2	0	11	0
Mvmt Flow	13	528	473	16	10	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	489	0	-	0	1035	481
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.1	-	-	-	6.51	6.2
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	2.2	-	-	-	3.599	3.3
Pot Cap-1 Maneuver	1085	-	-	-	247	589
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1085	-	-	-	243	589
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	558	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		16.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1085	-	-	-	243	589
HCM Lane V/C Ratio	0.012	-	-	-	0.04	0.011
HCM Control Delay (s)	8.4	0	-	-	20.4	11.2
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	639	600	13	22	7
Future Vol, veh/h	4	639	600	13	22	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	6	0	0
Mvmt Flow	4	695	652	14	24	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	666	0	-	0	1362	659
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	933	-	-	-	165	467
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	933	-	-	-	164	467
Mov Cap-2 Maneuver	-	-	-	-	164	-
Stage 1	-	-	-	-	514	-
Stage 2	-	-	-	-	495	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		26.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	933	-	-	-	164	467
HCM Lane V/C Ratio	0.005	-	-	-	0.146	0.016
HCM Control Delay (s)	8.9	0	-	-	30.7	12.8
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	878	786	27	16	11
Future Vol, veh/h	22	878	786	27	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	6	0	0
Mvmt Flow	24	954	854	29	17	12
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	883	0	-	0	1871	869
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	1002	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	775	-	-	-	80	354
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	358	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	775	-	-	-	75	354
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	358	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		46		
HCM LOS				E		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	775	-	-	-	75	354
HCM Lane V/C Ratio	0.031	-	-	-	0.232	0.034
HCM Control Delay (s)	9.8	0	-	-	66.9	15.5
HCM Lane LOS	A	A	-	-	F	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8	0.1

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	346	26	22	281	56	54
Future Vol, veh/h	346	26	22	281	56	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	4	18	6	5	11
Mvmt Flow	376	28	24	305	61	59
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	404	0	743	390
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	-	-	4.28	-	6.45	6.31
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.362	-	3.545	3.399
Pot Cap-1 Maneuver	-	-	1073	-	378	639
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	705	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1073	-	370	639
Mov Cap-2 Maneuver	-	-	-	-	370	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	689	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		15.4	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	466	-	-	1073	-	
HCM Lane V/C Ratio	0.257	-	-	0.022	-	
HCM Control Delay (s)	15.4	-	-	8.4	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	1	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	461	34	35	391	57	73
Future Vol, veh/h	461	34	35	391	57	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	3	1	7	1
Mvmt Flow	501	37	38	425	62	79
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	538	0	1021	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.13	-	6.47	6.21
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.227	-	3.563	3.309
Pot Cap-1 Maneuver	-	-	1025	-	256	558
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1025	-	247	558
Mov Cap-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	577	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		21.3	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	360	-	-	1025	-	
HCM Lane V/C Ratio	0.393	-	-	0.037	-	
HCM Control Delay (s)	21.3	-	-	8.6	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-	

Bruin Boulevard at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	13.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	625	47	40	508	101	98
Future Vol, veh/h	625	47	40	508	101	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	4	18	6	5	11
Mvmt Flow	679	51	43	552	110	107
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	730	0	1343	705
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	638	-
Critical Hdwy	-	-	4.28	-	6.45	6.31
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.362	-	3.545	3.399
Pot Cap-1 Maneuver	-	-	805	-	165	422
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	805	-	156	422
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	493	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		94.7	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	226	-	-	805	-	
HCM Lane V/C Ratio	0.957	-	-	0.054	-	
HCM Control Delay (s)	94.7	-	-	9.7	-	
HCM Lane LOS	F	-	-	A	-	
HCM 95th %tile Q(veh)	8.4	-	-	0.2	-	

Bruin Boulevard at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	68					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	833	61	63	706	103	132
Future Vol, veh/h	833	61	63	706	103	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	4	18	6	5	11
Mvmt Flow	905	66	68	767	112	143
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	971	0	1841	938
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	903	-
Critical Hdwy	-	-	4.28	-	6.45	6.31
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.362	-	3.545	3.399
Pot Cap-1 Maneuver	-	-	650	-	~ 81	308
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	650	-	~ 72	308
Mov Cap-2 Maneuver	-	-	-	-	~ 72	-
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	350	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.9		\$ 546.6		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	126	-	-	650	-	
HCM Lane V/C Ratio	2.027	-	-	0.105	-	
HCM Control Delay (s)	\$ 546.6	-	-	11.2	-	
HCM Lane LOS	F	-	-	B	-	
HCM 95th %tile Q(veh)	20.8	-	-	0.4	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Juliana Dr. at Norwich Ave.
Woodstock, ON

Existing Traffic AM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	196	130	265	170	15	100	325	242	30	252	35
Future Volume (vph)	67	196	130	265	170	15	100	325	242	30	252	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99		1.00			0.99			1.00	
Frt			0.850		0.988			0.936			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1636	1352	2906	1593	0	1568	2881	0	1511	3007	0
Flt Permitted	0.950			0.950			0.527			0.390		
Satd. Flow (perm)	1583	1636	1334	2906	1593	0	870	2881	0	620	3007	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151		4			165			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			164.7			119.8	
Travel Time (s)		8.9			37.5			11.9			8.6	
Confl. Peds. (#/hr)			1			3			1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	7%	10%	11%	8%	13%	6%	7%	7%	10%	9%	3%
Adj. Flow (vph)	73	213	141	288	185	16	109	353	263	33	274	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	213	141	288	201	0	109	616	0	33	312	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	11.6	21.4	21.4	18.2	30.5		66.8	56.9		62.5	51.1	
Actuated g/C Ratio	0.10	0.18	0.18	0.15	0.25		0.55	0.47		0.51	0.42	
v/c Ratio	0.49	0.74	0.39	0.66	0.50		0.21	0.43		0.09	0.25	

Juliana Dr. at Norwich Ave.
Woodstock, ON

Existing Traffic AM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	62.5	62.9	8.6	56.3	43.1		16.4	18.8		16.2	24.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	62.5	62.9	8.6	56.3	43.1		16.4	18.8		16.2	24.6	
LOS	E	E	A	E	D		B	B		B	C	
Approach Delay	44.9			50.9			18.5			23.8		
Approach LOS	D			D			B			C		
Queue Length 50th (m)	17.7	51.2	0.0	35.8	44.0		12.8	40.8		3.7	25.5	
Queue Length 95th (m)	32.9	75.4	14.9	48.8	64.3		27.1	68.2		10.5	42.3	
Internal Link Dist (m)	99.3			497.4			140.7			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	194	340	397	595	459		535	1431		403	1267	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.38	0.63	0.36	0.48	0.44		0.20	0.43		0.08	0.25	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 33.1

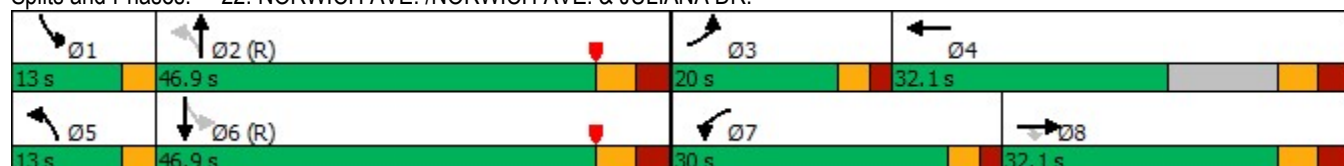
Intersection LOS: C

Intersection Capacity Utilization 78.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Juliana Dr. at Norwich Ave.
Woodstock, ON

Existing Traffic PM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	248	134	419	236	47	120	487	232	68	417	67
Future Volume (vph)	163	248	134	419	236	47	120	487	232	68	417	67
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.98		1.00			0.99			1.00	
Frt			0.850		0.975			0.952			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1646	1683	1444	3162	1696	0	1599	2981	0	1630	3213	0
Flt Permitted	0.950			0.950			0.365			0.252		
Satd. Flow (perm)	1646	1683	1414	3162	1696	0	614	2981	0	432	3213	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151		8			70			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			164.7			119.8	
Travel Time (s)		8.9			37.5			11.9			8.6	
Confl. Peds. (#/hr)			6			4			3			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	4%	3%	2%	0%	2%	4%	3%	10%	2%	1%	0%
Adj. Flow (vph)	177	270	146	455	257	51	130	529	252	74	453	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	270	146	455	308	0	130	781	0	74	526	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effect Green (s)	14.9	23.4	23.4	22.5	31.1		59.4	47.5		57.1	44.7	
Actuated g/C Ratio	0.12	0.19	0.19	0.18	0.25		0.49	0.39		0.47	0.37	
v/c Ratio	0.88	0.84	0.37	0.78	0.70		0.35	0.65		0.26	0.44	

Juliana Dr. at Norwich Ave.
Woodstock, ON

Existing Traffic PM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	91.8	69.5	8.7	57.1	48.9		20.7	32.5		20.0	31.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	91.8	69.5	8.7	57.1	48.9		20.7	32.5		20.0	31.0	
LOS	F	E	A	E	D		C	C		C	C	
Approach Delay	61.2			53.8			30.8			29.6		
Approach LOS	E			D			C			C		
Queue Length 50th (m)	44.5	64.3	0.0	56.3	66.2		18.5	82.8		10.1	54.0	
Queue Length 95th (m)	#86.5	#106.3	16.7	74.2	98.2		31.6	110.0		19.5	71.6	
Internal Link Dist (m)	99.3			497.4			140.7			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	202	347	411	647	492		380	1203		305	1186	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.88	0.78	0.36	0.70	0.63		0.34	0.65		0.24	0.44	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 43.0

Intersection LOS: D

Intersection Capacity Utilization 88.1%

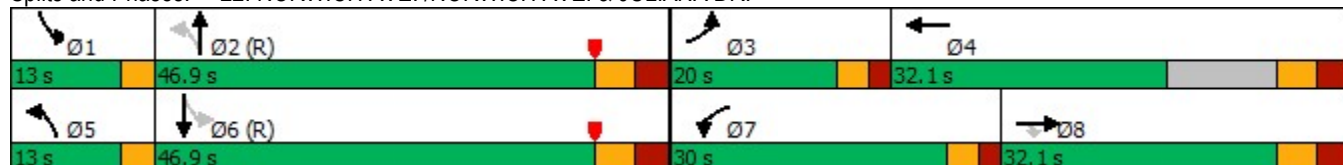
ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	354	235	479	307	27	181	587	437	54	455	63
Future Volume (vph)	121	354	235	479	307	27	181	587	437	54	455	63
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99		1.00			0.99			1.00	
Frt			0.850		0.988			0.936			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1636	1352	2906	1593	0	1568	2881	0	1511	3007	0
Flt Permitted	0.950			0.950			0.315			0.100		
Satd. Flow (perm)	1583	1636	1334	2906	1593	0	520	2881	0	159	3007	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250		4			164			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			164.7			119.8	
Travel Time (s)		8.9			37.5			11.9			8.6	
Confl. Peds. (#/hr)			1			3			1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	7%	10%	11%	8%	13%	6%	7%	7%	10%	9%	3%
Adj. Flow (vph)	132	385	255	521	334	29	197	638	475	59	495	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	385	255	521	363	0	197	1113	0	59	563	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effect Green (s)	14.0	25.5	25.5	24.5	36.0		55.6	43.7		52.2	40.0	
Actuated g/C Ratio	0.11	0.21	0.21	0.20	0.30		0.46	0.36		0.43	0.33	
v/c Ratio	0.73	1.13	0.53	0.90	0.77		0.61	0.98		0.37	0.57	

Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	75.1	131.2	10.0	66.6	51.4		29.8	55.8		25.0	35.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.1	131.2	10.0	66.6	51.4		29.8	55.8		25.0	35.7	
LOS	E	F	A	E	D		C	E		C	D	
Approach Delay	81.5			60.3			51.9			34.6		
Approach LOS	F			E			D			C		
Queue Length 50th (m)	32.3	~114.1	1.0	66.1	83.6		29.6	~135.8		8.1	60.0	
Queue Length 95th (m)	#60.2	#176.5	25.3	#96.0	#130.6		46.8	#190.3		16.3	79.2	
Internal Link Dist (m)	99.3			497.4			140.7			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	194	342	477	595	472		323	1138		181	995	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.68	1.13	0.53	0.88	0.77		0.61	0.98		0.33	0.57	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 57.3

Intersection LOS: E

Intersection Capacity Utilization 98.5%

ICU Level of Service F

Analysis Period (min) 15

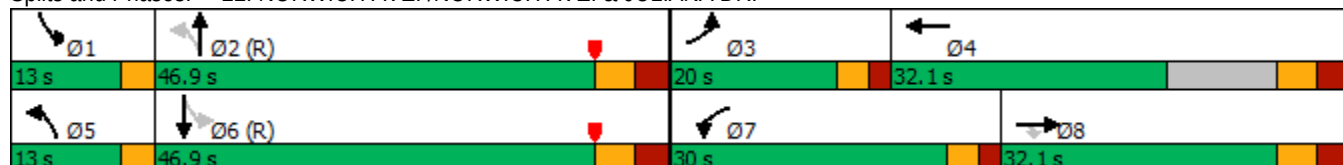
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	448	242	757	426	85	217	880	419	123	753	121
Future Volume (vph)	294	448	242	757	426	85	217	880	419	123	753	121
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99		1.00			0.99			1.00	
Frt			0.850		0.975			0.952			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1636	1352	2906	1564	0	1568	2937	0	1511	2999	0
Flt Permitted	0.950			0.950			0.115			0.100		
Satd. Flow (perm)	1583	1636	1334	2906	1564	0	190	2937	0	159	2999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178		8			69			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			164.7			119.8	
Travel Time (s)		8.9			37.5			11.9			8.6	
Confl. Peds. (#/hr)			1			3			1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	7%	10%	11%	8%	13%	6%	7%	7%	10%	9%	3%
Adj. Flow (vph)	320	487	263	823	463	92	236	957	455	134	818	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	320	487	263	823	555	0	236	1412	0	134	950	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effect Green (s)	15.0	25.0	25.0	25.0	35.0		54.2	40.3		53.6	40.0	
Actuated g/C Ratio	0.12	0.20	0.20	0.20	0.29		0.44	0.33		0.44	0.33	
v/c Ratio	1.65	1.45	0.64	1.38	1.22		1.20	1.39		0.76	0.96	

Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	348.2	256.0	22.5	220.1	156.1		154.9	213.3		50.0	59.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	348.2	256.0	22.5	220.1	156.1		154.9	213.3		50.0	59.5	
LOS	F	F	C	F	F		F	F		D	E	
Approach Delay	226.1			194.3			204.9			58.3		
Approach LOS	F			F			F			E		
Queue Length 50th (m)	~116.9	~167.6	18.5	~142.0	~171.3		~54.0	~245.7		19.3	121.4	
Queue Length 95th (m)	#175.6	#235.3	49.5	#182.1	#242.8		#107.3	#291.0		#49.0	#166.3	
Internal Link Dist (m)	99.3			497.4			140.7			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	194	335	414	595	454		197	1016		181	994	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.65	1.45	0.64	1.38	1.22		1.20	1.39		0.74	0.96	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.65

Intersection Signal Delay: 175.8

Intersection LOS: F

Intersection Capacity Utilization 116.6%

ICU Level of Service H

Analysis Period (min) 15

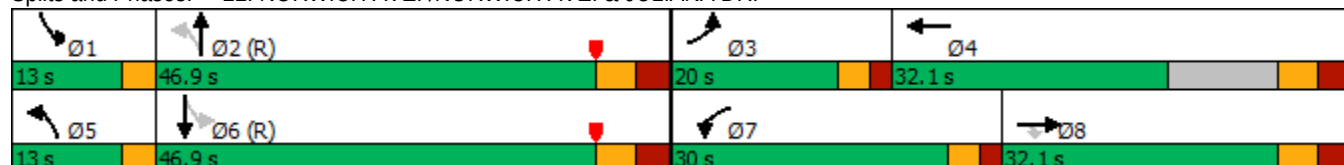
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Intersection						
Int Delay, s/veh	1.6					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	27	36	45	282	390	92
Future Vol, veh/h	27	36	45	282	390	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	14	4	14	6	1
Mvmt Flow	29	39	49	307	424	100
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	879	474	524	0	-	0
Stage 1	474	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.47	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.426	2.236	-	-	-
Pot Cap-1 Maneuver	312	567	1032	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	297	567	1032	-	-	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Approach	SE	NE	SW			
HCM Control Delay, s	15.6	1.2	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR		
Capacity (veh/h)	1032	- 408	-	-		
HCM Lane V/C Ratio	0.047	- 0.168	-	-		
HCM Control Delay (s)	8.7	- 15.6	-	-		
HCM Lane LOS	A	- C	-	-		
HCM 95th %tile Q(veh)	0.1	- 0.6	-	-		

Intersection						
Int Delay, s/veh	3.5					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	64	48	41	437	618	132
Future Vol, veh/h	64	48	41	437	618	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	4	5	7	2	1
Mvmt Flow	70	52	45	475	672	143
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1309	744	815	0	-	0
Stage 1	744	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.42	6.24	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.336	2.245	-	-	-
Pot Cap-1 Maneuver	176	411	799	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	411	799	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	39	0.8		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	799	-	223	-	-	
HCM Lane V/C Ratio	0.056	-	0.546	-	-	
HCM Control Delay (s)	9.8	-	39	-	-	
HCM Lane LOS	A	-	E	-	-	
HCM 95th %tile Q(veh)	0.2	-	2.9	-	-	

Montclair Drive at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	5.5					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	49	65	81	509	704	166
Future Vol, veh/h	49	65	81	509	704	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	14	4	14	6	1
Mvmt Flow	53	71	88	553	765	180
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1584	855	945	0	-	0
Stage 1	855	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Critical Hdwy	6.47	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.426	2.236	-	-	-
Pot Cap-1 Maneuver	116	341	718	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	102	341	718	-	-	-
Mov Cap-2 Maneuver	102	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	68.5	1.5		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	718	-	170	-	-	
HCM Lane V/C Ratio	0.123	-	0.729	-	-	
HCM Control Delay (s)	10.7	-	68.5	-	-	
HCM Lane LOS	B	-	F	-	-	
HCM 95th %tile Q(veh)	0.4	-	4.5	-	-	

Montclair Drive at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Existing Geometric Configuration

Intersection						
Int Delay, s/veh	150.6					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	116	87	74	789	1116	238
Future Vol, veh/h	116	87	74	789	1116	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	14	4	14	6	1
Mvmt Flow	126	95	80	858	1213	259
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2361	1343	1472	0	-	0
Stage 1	1343	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Critical Hdwy	6.47	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.426	2.236	-	-	-
Pot Cap-1 Maneuver	~ 38	175	452	-	-	-
Stage 1	237	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 31	175	452	-	-	-
Mov Cap-2 Maneuver	~ 31	-	-	-	-	-
Stage 1	195	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Approach	SE	NE	SW			
HCM Control Delay, s	1789.4	1.3	0			
HCM LOS	F					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	452	-	48	-	-	
HCM Lane V/C Ratio	0.178	-	4.597	-	-	
HCM Control Delay (s)	14.7	\$	1789.4	-	-	
HCM Lane LOS	B	-	F	-	-	
HCM 95th %tile Q(veh)	0.6	-	24.9	-	-	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Appendix D

TRAFFIC SIGNAL WARRANTS – SUMMARY OF JUSTIFICATIONS

Mill Street (CR 12) at Juliana Drive

Finkle Street at Juliana Drive

Athlone Avenue at Juliana Drive

Lampman Place at Juliana Drive

Bruin Boulevard at Juliana Drive

Montclair Drive at Juliana Drive

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Total Traffic (Horizon Year 2043)

Finkle Street at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	75 ⁽¹⁾	75
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	92 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	53 ⁽³⁾	53
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	91 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		53
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

- * Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.
- ** The Lowest Sectional Percentage Governs the Entire Warrant.
- *** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

(1) = $(1005 + 1154) / 4 / 720 = 75\%$

(2) = $(302 + 325) / 4 / 170 = 92\%$

(3) = $(703 + 829) / 4 / 720 = 53\%$

(4) = $(128 + 145) / 4 / 75 = 91\%$

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Total Traffic (Horizon Year 2043)

Mill Street at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	140 ⁽¹⁾	58
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	58 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	120 ⁽³⁾	90
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	90 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		58
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

- * Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.
- ** The Lowest Sectional Percentage Governs the Entire Warrant.
- *** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

(1) = $(1839 + 2207) / 4 / 720 = 140\%$

(2) = $(192 + 395) / 4 / (170 \times 1.5) = 58\%$

(3) = $(1647 + 1812) / 4 / 720 = 120\%$

(4) = $(85 + 184) / 4 / 75 = 90\%$

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Background Traffic (Horizon Year 2043)

Athlone Avenue at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	104 ⁽¹⁾	47
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	47 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	87 ⁽³⁾	11
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	11 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		11
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

* Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.

** The Lowest Sectional Percentage Governs the Entire Warrant.

*** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

$$(1) = (1267 + 1730) / 4 / 720 = 104\%$$

$$(2) = (127 + 354) / 4 / (170 \times 1.5) = 47\%$$

$$(3) = (1140 + 1376) / 4 / 720 = 87\%$$

$$(4) = (2 + 31) / 4 / 75 = 11\%$$

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Background Traffic (Horizon Year 2043)

Lampman Place at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	105 ⁽¹⁾	5
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	5 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	103 ⁽³⁾	13
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	13 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		5
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

* Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.

** The Lowest Sectional Percentage Governs the Entire Warrant.

*** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

$$(1) = (1285 + 1740) / 4 / 720 = 105\%$$

$$(2) = (29 + 27) / 4 / (170 \times 1.5) = 5\%$$

$$(3) = (1256 + 1713) / 4 / 720 = 103\%$$

$$(4) = (22 + 16) / 4 / 75 = 13\%$$

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Background Traffic (Horizon Year 2043)

Bruin Boulevard at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	115 ⁽¹⁾	43
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	43 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	100 ⁽³⁾	68
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	68 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		43
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

- * Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.
- ** The Lowest Sectional Percentage Governs the Entire Warrant.
- *** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

- (1) = $(1419 + 1898) / 4 / 720 = 115\%$
- (2) = $(199 + 235) / 4 / (170 \times 1.5) = 43\%$
- (3) = $(1220 + 1663) / 4 / 720 = 100\%$
- (4) = $(101 + 103) / 4 / 75 = 68\%$

Traffic Signal Warrants – Summary of Justifications (OTM Book 12)

Projected Background Traffic (Horizon Year 2043)

Montclair Drive at Juliana Drive

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENTS FOR TWO-LANE ROADWAYS		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW		
		OPERATING SPEED GREATER THAN OR EQUAL TO 70 km/h	OPERATING SPEED LESS THAN 70 km/h	SECTIONAL %	ENTIRE %**
1. MINIMUM VEHICULAR VOLUME	A*. Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of an Average Day, and	480	720	139 ⁽¹⁾	31
	B***. Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	120	170	31 ⁽²⁾	
2. DELAY TO CROSS TRAFFIC	A*. Vehicle Volume, Major Street for Each of the Heaviest 8 Hours of an Average Day, and	480	720	128 ⁽³⁾	55
	B*. Combined Vehicle and Pedestrian Volume Crossing the Major Street for Each of the Same 8 Hours.	50	75	55 ⁽⁴⁾	
3. VOLUME/DELAY COMBINATIONS	The Above Justifications (1 and 2) Both Satisfied to the Extent of 80% or more	YES ☐	NO ☒		31
4. MIN. FOUR HOUR VEHICLE VOLUME	At Plotted Point Representing Hourly Volume for Minor Approach vs. Major Approach for Four Highest Hours of an Average Day Fall above the Applicable Curve	YES ☐	NO ☐		N/A
5. COLLISION EXPERIENCE	A. Total Reported Accidents of Types Susceptible to Correction by a Traffic Signal, per 12 Month Period Averaged over a 36 Month Period, and	5		N/A	N/A
	B. Adequate Trial of Less Restrictive Remedies. Where Satisfactory Observance and Enforcement Have Failed to Reduce the Number of Collisions	YES ☐	NO ☐		
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted Point Representing 8 Hour Pedestrian Volume vs. 8 Hour Vehicular Volume Fall in Justified Zone, and	YES ☐	NO ☐		N/A
	B. Plotted Point Representing 8 Hour Volume of Pedestrian Experiencing Delays of 10 s or more vs. 8 Hour Pedestrian Volume Fall in Justified Zone	YES ☐	NO ☐		

Notes

- * Vehicle Volume Warrants 1A and 2A for Roadways Having Two or More Moving Lanes in One Direction Should be 25% Higher than Values Given Above.
- ** The Lowest Sectional Percentage Governs the Entire Warrant.
- *** For "T" Intersections, the Values for Warrant (1B) should be increased by 50%.

Justification 7 - Future Traffic Volumes

(1) = $(1574 + 2420) / 4 / 720 = 139\%$

(2) = $(114 + 203) / 4 / (170 \times 1.5) = 31\%$

(3) = $(1460 + 2217) / 4 / 720 = 128\%$

(4) = $(49 + 116) / 4 / 75 = 55\%$

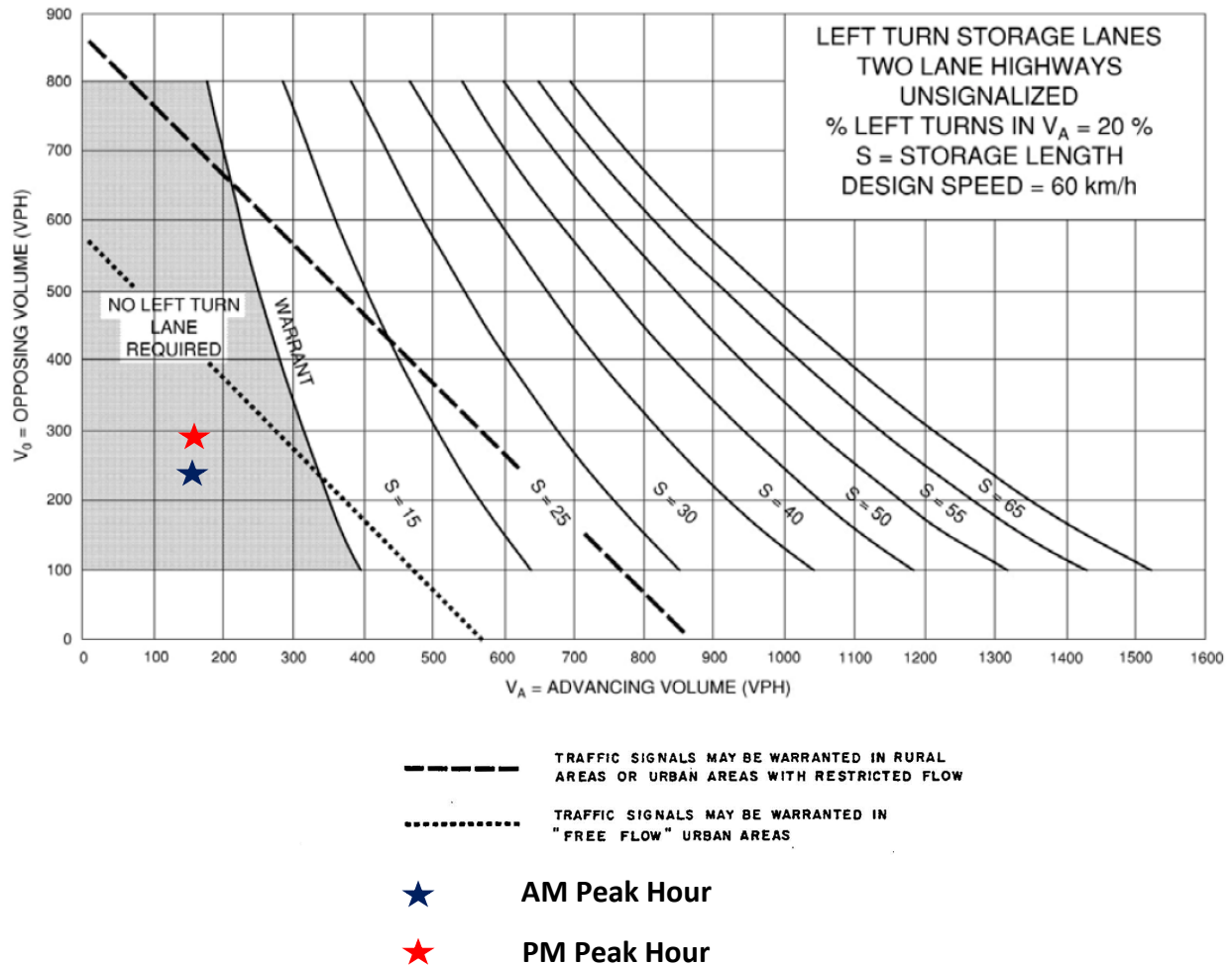
Appendix E

LEFT TURN LANE WARRANTS

**Finkle Street at Juliana Drive
Lampman Place at Juliana Drive**

Finkle Street at Juliana Drive – Westbound Left Turn Lane Warrants

Existing Traffic – AM & PM Peak Hours

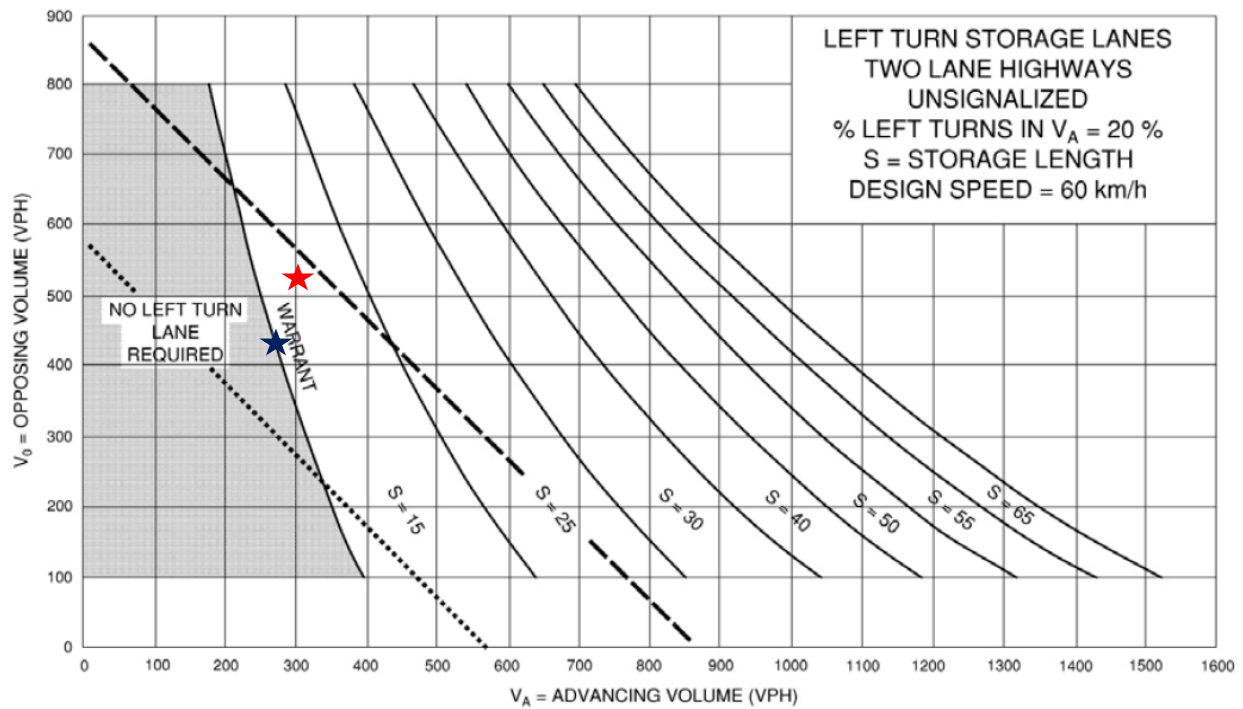


Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	152	237	31	20.4	0
PM	168	291	5	3.0*	0

* % left turns does not meet minimum MTO 5.0% requirement for warrant

Finkle Street at Juliana Drive – Westbound Left Turn Lane Warrants

Total Traffic 2043 – AM & PM Peak Hours



----- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

★ AM Peak Hour

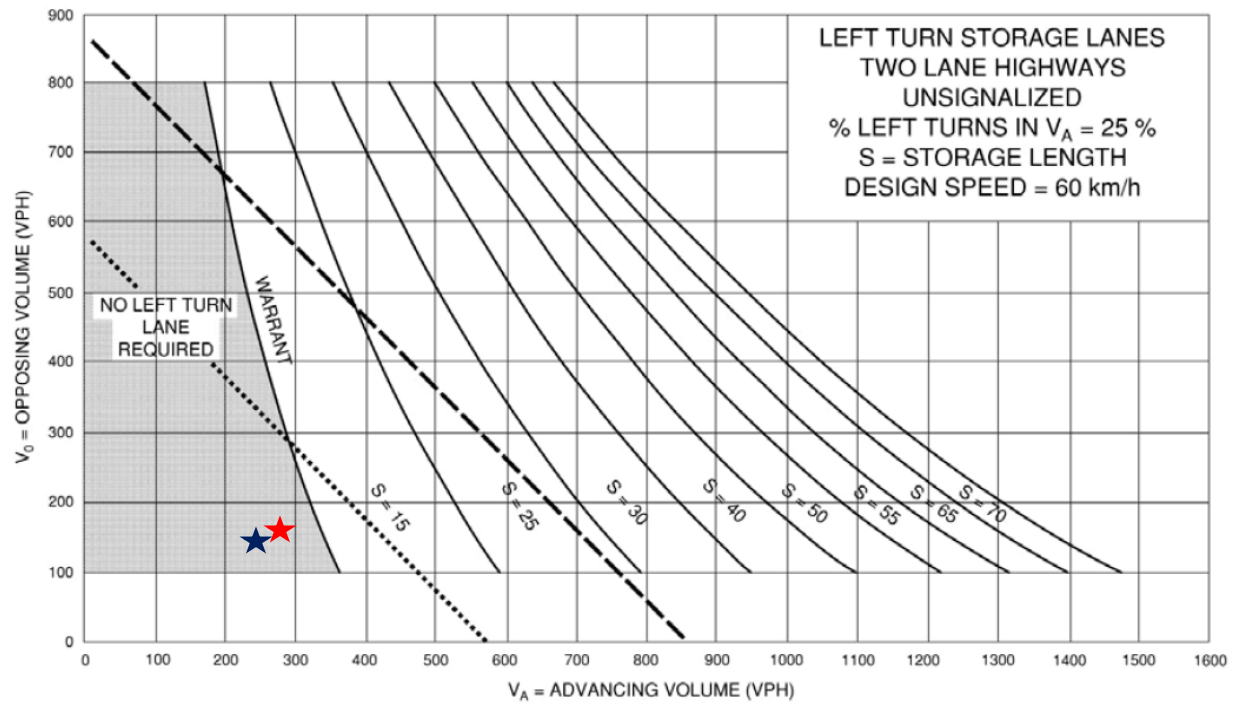
★ PM Peak Hour

Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	275	428	56	20.4	15
PM	304	525	9	3.0*	0

* % left turns does not meet minimum MTO 5.0% requirement for warrant

Finkle Street at Juliana Drive – Eastbound Left Turn Lane Warrants

Existing Traffic – AM & PM Peak Hours



AM Peak Hour

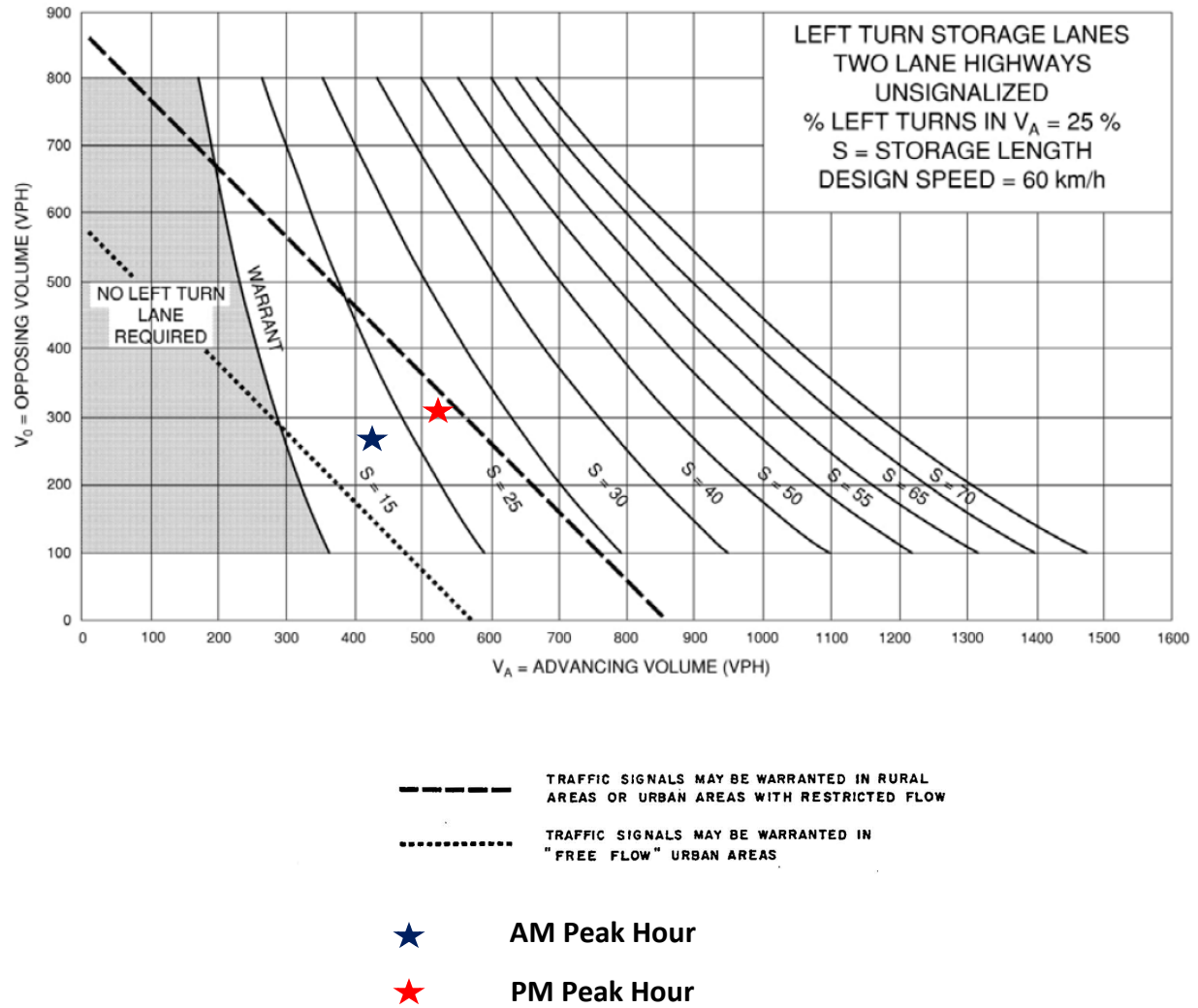


PM Peak Hour

Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	237	152	66	27.8	0
PM	291	168	78	26.8	0

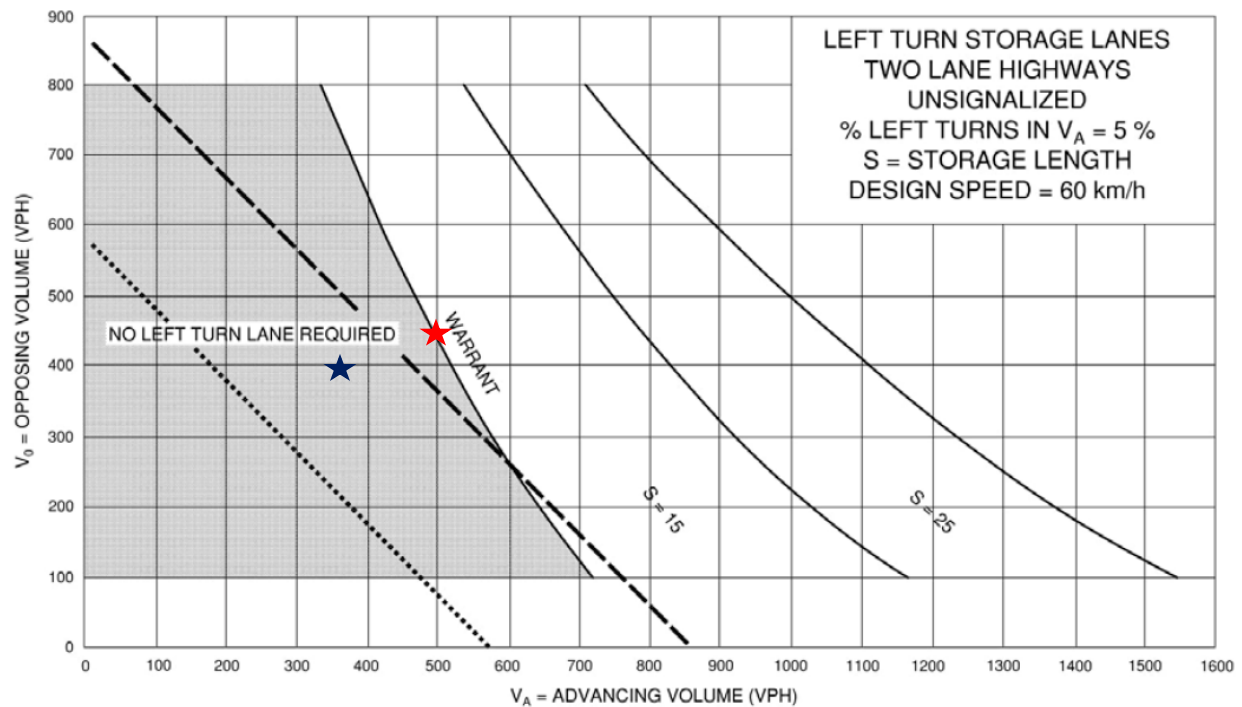
Finkle Street at Juliana Drive – Eastbound Left Turn Lane Warrants

Total Traffic 2043 – AM & PM Peak Hours



Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	428	275	119	27.8	15
PM	525	304	141	26.9	25

Lampman Place at Juliana Drive – Eastbound Left Turn Lane Warrants



Existing Traffic – AM & PM Peak Hours

--- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

★ AM Peak Hour

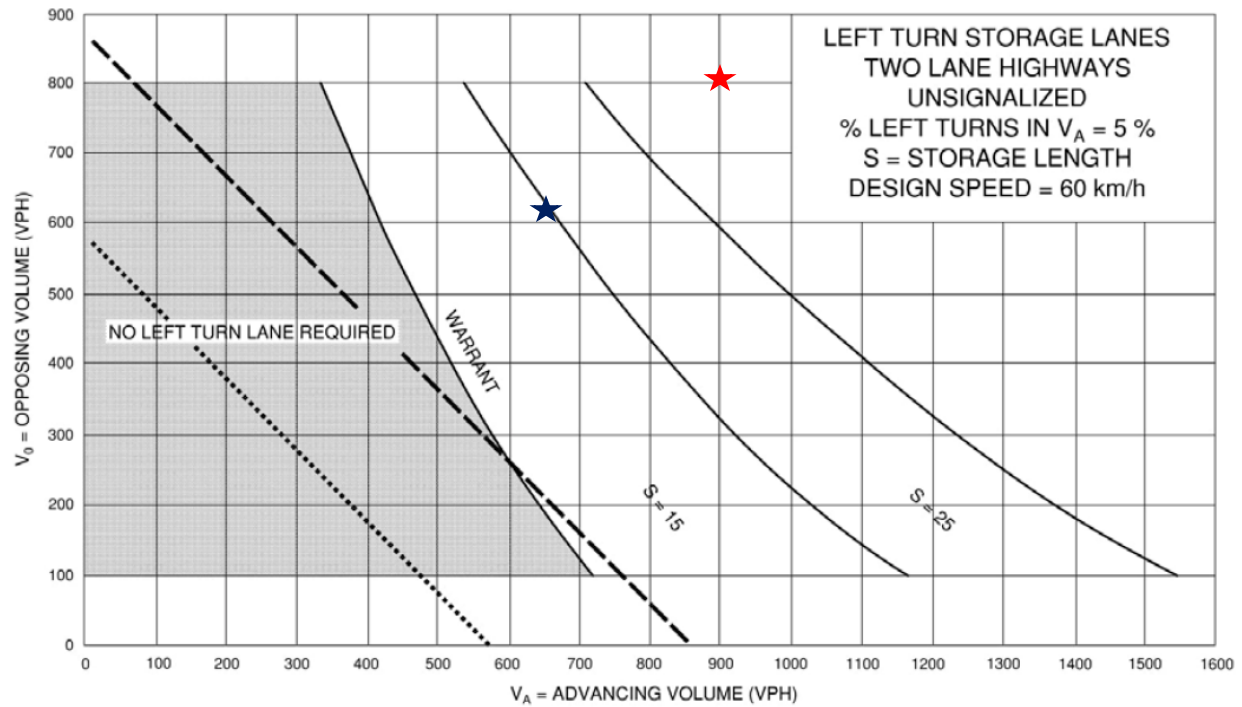
★ PM Peak Hour

Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	356	339	2	0.6*	0
PM	498	450	12	2.4*	0

* % left turns does not meet minimum MTO 5.0% requirement for warrant

Lampman Place at Juliana Drive – Eastbound Left Turn Lane Warrants

Total Traffic 2043 – AM & PM Peak Hours



--- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

★ AM Peak Hour

★ PM Peak Hour

Peak Period	Approaching Volume	Opposing Volume	# Left Turns	% Left Turns	Storage Required (m)
AM	643	613	4	0.6*	25
PM	900	813	22	2.4*	25+

* % left turns does not meet minimum MTO 5.0% requirement for warrant

Appendix F

DETAILED SYNCHRO RESULTS PROPOSED CONFIGURATION

Mill Street (CR 12) at Juliana Drive

Finkle Street at Juliana Drive

Athlone Avenue at Juliana Drive

Lampman Place at Juliana Drive

Bruin Boulevard at Juliana Drive

Norwich Avenue (CR 59) at Juliana Drive

Montclair Drive at Juliana Drive

Mill Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Proposed Geometric Configuration

Intersection						
Int Delay, s/veh	26.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	107	486	211	253	697
Future Vol, veh/h	85	107	486	211	253	697
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	12	8	3	4	5
Mvmt Flow	92	116	528	229	275	758
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1836	528	0	0	757	0
Stage 1	528	-	-	-	-	-
Stage 2	1308	-	-	-	-	-
Critical Hdwy	6.53	6.32	-	-	4.14	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.408	-	-	2.236	-
Pot Cap-1 Maneuver	~ 78	531	-	-	845	-
Stage 1	570	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	531	-	-	845	-
Mov Cap-2 Maneuver	~ 53	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	240.1	0		3		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	53	531	845	-
HCM Lane V/C Ratio	-	-	1.743	0.219	0.325	-
HCM Control Delay (s)	-	-	\$ 525.2	13.7	11.3	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	8.8	0.8	1.4	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	148.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	184	211	791	154	186	681
Future Vol, veh/h	184	211	791	154	186	681
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	46	34	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	1	3	2	3	3
Mvmt Flow	200	229	860	167	202	740
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2004	860	0	0	1027	0
Stage 1	860	-	-	-	-	-
Stage 2	1144	-	-	-	-	-
Critical Hdwy	6.42	6.21	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.309	-	-	2.227	-
Pot Cap-1 Maneuver	~ 65	357	-	-	672	-
Stage 1	414	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 45	357	-	-	672	-
Mov Cap-2 Maneuver	~ 45	-	-	-	-	-
Stage 1	414	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s\$	823.7	0		2.7		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	45	357	672	-
HCM Lane V/C Ratio	-	-	4.444	0.642	0.301	-
HCM Control Delay (s)	-	\$	1732.1	31.5	12.6	-
HCM Lane LOS	-	-	F	D	B	-
HCM 95th %tile Q(veh)	-	-	22.7	4.3	1.3	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Finkle Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Proposed Geometric Configuration

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	119	293	16	56	199	20	14	63	25	51	61	88
Future Vol, veh/h	119	293	16	56	199	20	14	63	25	51	61	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	5	0	3	9	9	25	9	0	0	6	6
Mvmt Flow	129	318	17	61	216	22	15	68	27	55	66	96
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	15.1	13	11.6	12.4
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	14%	100%	0%	100%	0%	26%
Vol Thru, %	62%	0%	95%	0%	91%	30%
Vol Right, %	25%	0%	5%	0%	9%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	119	309	56	219	200
LT Vol	14	119	0	56	0	51
Through Vol	63	0	293	0	199	61
RT Vol	25	0	16	0	20	88
Lane Flow Rate	111	129	336	61	238	217
Geometry Grp	2	5	5	5	5	2
Degree of Util (X)	0.207	0.234	0.566	0.115	0.419	0.36
Departure Headway (Hd)	6.733	6.524	6.066	6.804	6.334	5.962
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	548	591	525	567	600
Service Time	4.82	4.284	3.825	4.57	4.1	4.036
HCM Lane V/C Ratio	0.209	0.235	0.569	0.116	0.42	0.362
HCM Control Delay	11.6	11.3	16.5	10.5	13.6	12.4
HCM Lane LOS	B	B	C	B	B	B
HCM 95th-tile Q	0.8	0.9	3.5	0.4	2.1	1.6

Finkle Street at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Proposed Geometric Configuration

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	141	359	25	9	262	33	11	61	29	69	65	90
Future Vol, veh/h	141	359	25	9	262	33	11	61	29	69	65	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	4	14	0	3	0	17	9	0	0	8	4
Mvmt Flow	153	390	27	10	285	36	12	66	32	75	71	98
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	21.8	18.4	12.4	14.6
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	11%	100%	0%	100%	0%	31%
Vol Thru, %	60%	0%	93%	0%	89%	29%
Vol Right, %	29%	0%	7%	0%	11%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	141	384	9	295	224
LT Vol	11	141	0	9	0	69
Through Vol	61	0	359	0	262	65
RT Vol	29	0	25	0	33	90
Lane Flow Rate	110	153	417	10	321	243
Geometry Grp	2	5	5	5	5	2
Degree of Util (X)	0.221	0.293	0.742	0.02	0.593	0.44
Departure Headway (Hd)	7.255	6.887	6.399	7.197	6.658	6.513
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	526	568	497	542	553
Service Time	5.313	4.587	4.099	4.94	4.4	4.559
HCM Lane V/C Ratio	0.223	0.291	0.734	0.02	0.592	0.439
HCM Control Delay	12.4	12.4	25.3	10.1	18.7	14.6
HCM Lane LOS	B	B	D	B	C	B
HCM 95th-tile Q	0.8	1.2	6.4	0.1	3.8	2.2

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	13	146	457	2	125
Future Vol, veh/h	524	13	146	457	2	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	6	6	0	12
Mvmt Flow	570	14	159	497	2	136
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	584	0	1392	577
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	-	-	4.16	-	6.4	6.32
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.254	-	3.5	3.408
Pot Cap-1 Maneuver	-	-	971	-	158	498
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	971	-	132	498
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	367	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	2.3		15		
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	260	498	-	-	971	-
HCM Lane V/C Ratio	0.008	0.273	-	-	0.163	-
HCM Control Delay (s)	19	14.9	-	-	9.4	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	1.1	-	-	0.6	-

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	583	13	132	648	31	323
Future Vol, veh/h	583	13	132	648	31	323
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	35	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	14	10	1	0	6
Mvmt Flow	634	14	143	704	34	351
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	648	0	1631	641
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	990	-
Critical Hdwy	-	-	4.2	-	6.4	6.26
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.354
Pot Cap-1 Maneuver	-	-	901	-	113	468
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	363	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	901	-	95	468
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	305	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		31.7	
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	468	-	-	901	-
HCM Lane V/C Ratio	0.156	0.75	-	-	0.159	-
HCM Control Delay (s)	24.7	32.4	-	-	9.8	-
HCM Lane LOS	C	D	-	-	A	-
HCM 95th %tile O(veh)	0.5	6.3	-	-	0.6	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	639	600	13	22	7
Future Vol, veh/h	4	639	600	13	22	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	30	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	6	6	0	0
Mvmt Flow	4	695	652	14	24	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	666	0	-	0	1362	659
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	703	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	933	-	-	-	165	467
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	933	-	-	-	164	467
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	495	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		16.6		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	933	-	-	-	305	467
HCM Lane V/C Ratio	0.005	-	-	-	0.078	0.016
HCM Control Delay (s)	8.9	-	-	-	17.8	12.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	878	786	27	16	11
Future Vol, veh/h	22	878	786	27	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	30	-	-	-	35	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	2	0	11	0
Mvmt Flow	24	954	854	29	17	12
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	883	0	-	0	1871	869
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	1002	-
Critical Hdwy	4.1	-	-	-	6.51	6.2
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	2.2	-	-	-	3.599	3.3
Pot Cap-1 Maneuver	775	-	-	-	75	354
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	342	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	775	-	-	-	73	354
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	342	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		21.1		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	775	-	-	-	198	354
HCM Lane V/C Ratio	0.031	-	-	-	0.088	0.034
HCM Control Delay (s)	9.8	-	-	-	24.9	15.5
HCM Lane LOS	A	-	-	-	C	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.1

Intersection						
Int Delay, s/veh	4.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	625	47	40	508	101	98
Future Vol, veh/h	625	47	40	508	101	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	4	18	6	5	11
Mvmt Flow	679	51	43	552	110	107
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	730	0	1343	705
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	638	-
Critical Hdwy	-	-	4.28	-	6.45	6.31
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.362	-	3.545	3.399
Pot Cap-1 Maneuver	-	-	805	-	165	422
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	805	-	156	422
Mov Cap-2 Maneuver	-	-	-	-	294	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	493	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		31.3	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	346	-	-	805	-	
HCM Lane V/C Ratio	0.625	-	-	0.054	-	
HCM Control Delay (s)	31.3	-	-	9.7	-	
HCM Lane LOS	D	-	-	A	-	
HCM 95th %tile Q(veh)	4	-	-	0.2	-	

Intersection						
Int Delay, s/veh	13					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	833	61	63	706	103	132
Future Vol, veh/h	833	61	63	706	103	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	23	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	3	1	7	1
Mvmt Flow	905	66	68	767	112	143
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	971	0	1841	938
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	903	-
Critical Hdwy	-	-	4.13	-	6.47	6.21
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.227	-	3.563	3.309
Pot Cap-1 Maneuver	-	-	706	-	~ 80	322
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	388	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	706	-	~ 72	322
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	351	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		101.8	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	253	-	-	706	-	
HCM Lane V/C Ratio	1.01	-	-	0.097	-	
HCM Control Delay (s)	101.8	-	-	10.6	-	
HCM Lane LOS	F	-	-	B	-	
HCM 95th %tile Q(veh)	9.9	-	-	0.3	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Proposed Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	354	235	479	307	27	181	587	437	54	455	63
Future Volume (vph)	121	354	235	479	307	27	181	587	437	54	455	63
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.99		1.00			0.99			1.00	
Frt			0.850		0.988			0.936			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1636	1352	2906	1593	0	1568	2881	0	1511	3007	0
Flt Permitted	0.950			0.950			0.315			0.100		
Satd. Flow (perm)	1583	1636	1334	2906	1593	0	520	2881	0	159	3007	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250		4			164			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			183.0			119.8	
Travel Time (s)		8.9			37.5			13.2			8.6	
Confl. Peds. (#/hr)			1			3			1			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	7%	10%	11%	8%	13%	6%	7%	7%	10%	9%	3%
Adj. Flow (vph)	132	385	255	521	334	29	197	638	475	59	495	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	385	255	521	363	0	197	1113	0	59	563	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effect Green (s)	14.0	25.5	25.5	24.5	36.0		55.6	43.7		52.2	40.0	
Actuated g/C Ratio	0.11	0.21	0.21	0.20	0.30		0.46	0.36		0.43	0.33	
v/c Ratio	0.73	1.13	0.53	0.90	0.77		0.61	0.98		0.37	0.57	

Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Proposed Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	75.1	131.2	10.0	66.6	51.4		29.8	55.8		25.0	35.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.1	131.2	10.0	66.6	51.4		29.8	55.8		25.0	35.7	
LOS	E	F	A	E	D		C	E		C	D	
Approach Delay	81.5			60.3			51.9			34.6		
Approach LOS	F			E			D			C		
Queue Length 50th (m)	32.3	~114.1	1.0	66.1	83.6		29.6	~135.8		8.1	60.0	
Queue Length 95th (m)	#60.2	#176.5	25.3	#96.0	#130.6		46.8	#190.3		16.3	79.2	
Internal Link Dist (m)	99.3			497.4			159.0			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	194	342	477	595	472		323	1138		181	995	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.68	1.13	0.53	0.88	0.77		0.61	0.98		0.33	0.57	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 57.3

Intersection LOS: E

Intersection Capacity Utilization 98.5%

ICU Level of Service F

Analysis Period (min) 15

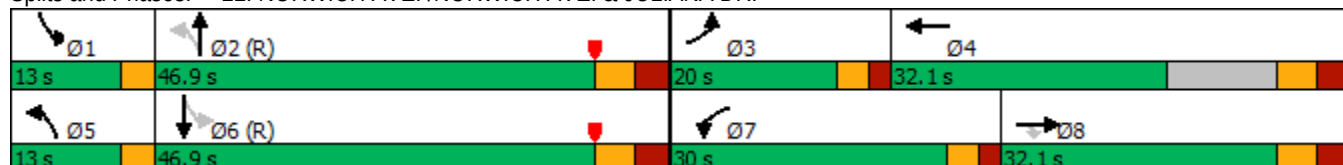
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Proposed Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	448	242	757	426	85	217	880	419	123	753	121
Future Volume (vph)	294	448	242	757	426	85	217	880	419	123	753	121
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (m)	50.0		0.0	63.0		0.0	70.0		0.0	38.0		0.0
Storage Lanes	1		1	2		0	1		0	1		0
Taper Length (m)	30.0			70.0			20.0			15.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.98		1.00			0.99			1.00	
Frt			0.850		0.975			0.952			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1646	1683	1444	3162	1696	0	1599	2981	0	1630	3213	0
Flt Permitted	0.950			0.950			0.115			0.100		
Satd. Flow (perm)	1646	1683	1414	3162	1696	0	194	2981	0	172	3213	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178		8			69			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.3			521.4			183.0			119.8	
Travel Time (s)		8.9			37.5			13.2			8.6	
Confl. Peds. (#/hr)			6			4			3			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	4%	3%	2%	0%	2%	4%	3%	10%	2%	1%	0%
Adj. Flow (vph)	320	487	263	823	463	92	236	957	455	134	818	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	320	487	263	823	555	0	236	1412	0	134	950	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8				2			6		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	10.0	10.0		7.0	40.0		7.0	40.0	
Minimum Split (s)	12.0	17.1	17.1	15.0	17.1		10.0	46.9		10.0	46.9	
Total Split (s)	20.0	32.1	32.1	30.0	32.1		13.0	46.9		13.0	46.9	
Total Split (%)	16.4%	26.3%	26.3%	24.6%	26.3%		10.7%	38.4%		10.7%	38.4%	
Maximum Green (s)	15.0	25.0	25.0	25.0	25.0		10.0	40.0		10.0	40.0	
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7		3.0	3.7		3.0	3.7	
All-Red Time (s)	2.0	3.4	3.4	2.0	3.4		0.0	3.2		0.0	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	7.1	7.1	5.0	7.1		3.0	6.9		3.0	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0		3.0	4.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)		10.0	10.0		10.0			10.0			10.0	
Flash Dont Walk (s)		15.0	15.0		15.0			14.0			14.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effect Green (s)	15.0	25.0	25.0	25.0	35.0		54.3	40.4		53.5	40.0	
Actuated g/C Ratio	0.12	0.20	0.20	0.20	0.29		0.45	0.33		0.44	0.33	
v/c Ratio	1.58	1.42	0.61	1.27	1.13		1.17	1.37		0.71	0.89	

Norwich Avenue at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Proposed Geometric Configuration

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	320.4	240.1	21.4	174.3	120.4		145.2	203.7		42.8	50.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	320.4	240.1	21.4	174.3	120.4		145.2	203.7		42.8	50.1	
LOS	F	F	C	F	F		F	F		D	D	
Approach Delay	210.3			152.6			195.3			49.2		
Approach LOS	F			F			F			D		
Queue Length 50th (m)	~114.8	~165.1	18.3	~134.9	~161.1		~52.5	~243.7		19.2	117.7	
Queue Length 95th (m)	#173.6	#232.7	48.5	#175.0	#232.5		#105.9	#288.9		#43.8	#156.3	
Internal Link Dist (m)	99.3			497.4			159.0			95.8		
Turn Bay Length (m)	50.0			63.0			70.0			38.0		
Base Capacity (vph)	202	344	431	647	492		201	1033		195	1064	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.58	1.42	0.61	1.27	1.13		1.17	1.37		0.69	0.89	

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 94.5 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.58

Intersection Signal Delay: 156.5

Intersection LOS: F

Intersection Capacity Utilization 116.7%

ICU Level of Service H

Analysis Period (min) 15

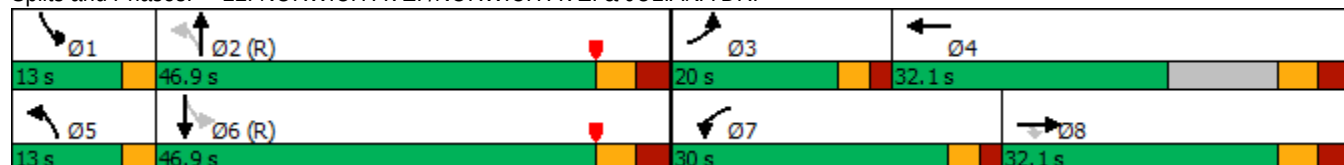
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 22: NORWICH AVE. /NORWICH AVE. & JULIANA DR.



Montclair Drive at Juliana Drive
Woodstock, ON.

Total Traffic 2043 AM Peak Hour
Proposed Geometric Configuration

Intersection						
Int Delay, s/veh	2.5					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	49	65	81	509	704	166
Future Vol, veh/h	49	65	81	509	704	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	14	4	14	6	1
Mvmt Flow	53	71	88	553	765	180
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1584	855	945	0	-	0
Stage 1	855	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Critical Hdwy	6.47	6.34	4.14	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.426	2.236	-	-	-
Pot Cap-1 Maneuver	116	341	718	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	102	341	718	-	-	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	27.3	1.5		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	718	-	283	-	-	
HCM Lane V/C Ratio	0.123	-	0.438	-	-	
HCM Control Delay (s)	10.7	-	27.3	-	-	
HCM Lane LOS	B	-	D	-	-	
HCM 95th %tile Q(veh)	0.4	-	2.1	-	-	

Montclair Drive at Juliana Drive
Woodstock, ON.

Total Traffic 2043 PM Peak Hour
Proposed Geometric Configuration

Intersection						
Int Delay, s/veh	26.4					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	116	87	74	789	1116	238
Future Vol, veh/h	116	87	74	789	1116	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	35	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	4	5	7	2	1
Mvmt Flow	126	95	80	858	1213	259
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	2361	1343	1472	0	-	0
Stage 1	1343	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Critical Hdwy	6.42	6.24	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.336	2.245	-	-	-
Pot Cap-1 Maneuver	~ 39	184	449	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 32	184	449	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	200	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s\$	308.7	1.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	449	-	148	-	-	
HCM Lane V/C Ratio	0.179	-	1.491	-	-	
HCM Control Delay (s)	14.8	-\$ 308.7		-	-	
HCM Lane LOS	B	-	F	-	-	
HCM 95th %tile Q(veh)	0.6	-	14.7	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon