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## MEMORANDUM

**TO:** Scott J. Patterson, BA, CPT, MCIP, RPP **RVA:** 226347  
**FROM:** Adam Mildenberger, Transportation Planner, R.V. Anderson Associates Ltd.  
**DATE:** May 30<sup>th</sup>, 2022  
**SUBJECT:** Traffic Brief for Proposed Residential Townhouse Development  
Adelaide Street Extension, west of Conestoga Street North

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### 1.0 Introduction

R.V. Anderson Associates Limited (RVA) has been retained by **2786713 Ontario Inc. a/a VED Homes** to undertake a Traffic Brief for the proposed residential townhouse development located on the proposed extension of Adelaide Street, west of Conestoga Street North, in the Township of Wellington North. The Traffic Brief has been requested by the Township of Wellington North as a condition of Draft Plan approval.

As confirmed with County and Town staff, the primary objectives of this study are to determine the traffic volumes expected to be generated by the proposed development during the weekday a.m. and p.m. peak hours, assess the operational impacts of the site generated traffic on the study intersections for the future horizon years, and identify the need for intersection improvements, if any.

As shown in **Figure 1**, the subject property is currently an undeveloped greenfield on the west side of Conestoga Street North, opposite Adelaide Street, situated in a predominantly residential area with agricultural lands (planned for redevelopment) to the west.



Figure 1: Site Location

## 2.0 Existing Road Network

**Adelaide Street** is an east-west local road under the jurisdiction of the Township of Wellington North with a two-lane cross-section (one lane per direction) and an assumed posted speed limit of 40km/hr. Currently spanning less than 500m in length, the surrounding land use is strictly residential throughout the entirety of the street. There are no pedestrian sidewalks or dedicated cycling facilities on the corridor, and no transit routes nearby.

**Conestoga Street North** is a north-south local road under the jurisdiction of the Township of Wellington North with a two-lane cross-section (one lane per direction) and an assumed posted speed limit of 40km/hr. The roadway services a residential subdivision and provides access to two east-west corridors, with Smith Street (Highway 6) to the south and Domville Street to the north. There is a pedestrian sidewalk available on the east side of

the roadway, from Smith Street (Highway 6) to Domville Street, and no dedicated cycling facilities.

**Domville Street** is an east-west street under the jurisdiction of the Township of Wellington North with a two-lane cross-section (one lane per direction) and an assumed posted speed limit of 50km/hr. Pedestrians are accommodated by a sidewalk along the south side of the roadway, with no dedicated facilities for cyclists.

**Smith Street (Highway 6)** is an east-west provincial road with a two-lane cross-section (one lane per direction) and a posted speed limit of 50km/hr. Pedestrian sidewalks are available on both sides of the street east of Conestoga Street North, but are only available on the south side as you travel west of Conestoga Street North.

### 3.0 Existing Traffic Volumes

A Traffic Impact Study was completed in 2020 for the proposed residential development at 321 Domville Street, which included an intersection traffic count (dated 2020) for the intersection of Smith Street (Highway 6) at Conestoga Street North, and is provided in **Appendix A**. The data was collected in July 2020 during the weekday a.m. and p.m. peak hours. Given the impacts COVID-19 restrictions have had on traffic volumes in the area, it is expected that current intersection volumes (2022) have remained generally similar to recent pre-COVID levels (i.e., 2020). Therefore, no annual growth rate has been applied to the historical 2020 volumes in order to estimate baseline 2022 intersection volumes, and therefore the 2020 volumes have been adopted as reasonable estimates of the current 2022 peak hour traffic levels.

Given no historical traffic volume data was available for the remaining two study intersections along Conestoga Street North (at Domville Street and at Adelaide Street), but historical north-south volumes were available from the aforementioned count at the intersection of Smith Street and Conestoga Street, peak hour turning movement volumes for Domville Street and Adelaide Street were estimated using the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition*. The trip generation rates provided in the Manual were used to estimate the trips being generated by the existing residential area, as well as the two factories on the western limit of Domville Street. The calculations for these developments can be seen in **Appendix B**. New counts were not conducted at these two intersections given the potential impacts COVID-restrictions may have had on the traffic counts, and furthermore because peak hour traffic volumes

on Conestoga Street North may notably change upon buildout of the Cachet Homes development site anyways, as discussed further in Section 4.

The trip distribution percentages applied the estimated trip generation from the existing uses in the area have been adopted from the approved 321 Domville Street TIS and are shown in **Table 1**, with pertinent pages from that TIS available in **Appendix C**.

*Table 1: Trip Distribution Rates*

Direction	Distribution Percentages
Highway 6 (West)	45%
Highway 6 (East)	45%
Domville Street (North)	10%
<b>Total</b>	<b>100%</b>

The assignment of the estimated 2022 intersection traffic volumes based on the trip distribution assumptions above are shown in **Figure 2**.

As shown, the estimated peak hour traffic volumes at the intersections of Conestoga Street North at Domville Street and Conestoga Street North at Adelaide Street are noticeably low, which was confirmed during our field investigations. As described in Section 7 of this memorandum, there is significant excess capacity at these two intersections, and should current post-COVID traffic volumes deviate from the estimates presented in this study, it is not expected to change the findings of the capacity analysis for these two intersections given the level of reserve capacity.

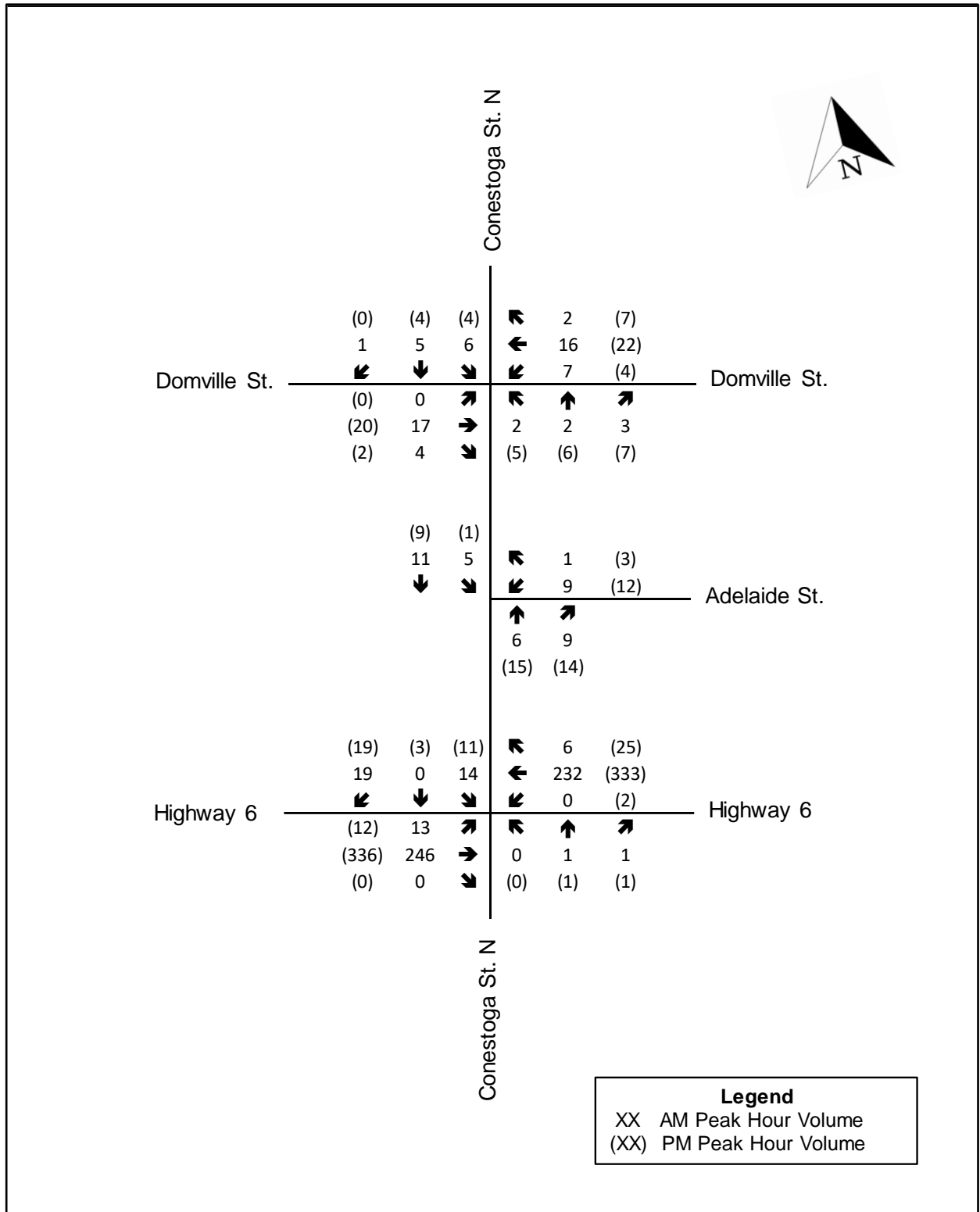


Figure 2: Baseline Traffic Volumes (2022)

## 4.0 Future Background Traffic Volumes

### 4.1 Study Horizon Years

Given build-out of the subject development is planned for 2023, future horizon years of 2023 (build-out) and 2028 (five years post build-out) were assumed for this study.

### 4.2 Future Background Developments

RVA is aware of the proposed residential subdivision located on the east side of Preston Street North, between Smith Street (Highway 6) and Domville Street. The development is planned to include 141 single-family detached units and 99 townhouse units, with three vehicular accesses off of Preston Street North and a planned build-out year of 2025. Trip generation calculations have been adopted from the approved TIS and are displayed in **Table 2**.

*Table 2: Background Development – Trip Generation Summary*

Peak Hour	Total Trips	Inbound / Outbound
Weekday a.m.	151	37 / 114
Weekday p.m.	196	123 / 73

The assumed traffic generation from the background development was distributed to the surrounding road network based on trip distribution assumptions stated in *Section 3.0*.

The resulting assignment of the background development traffic volumes to the study area road network during the weekday a.m. and p.m. peak hours is shown in **Figure 3**.

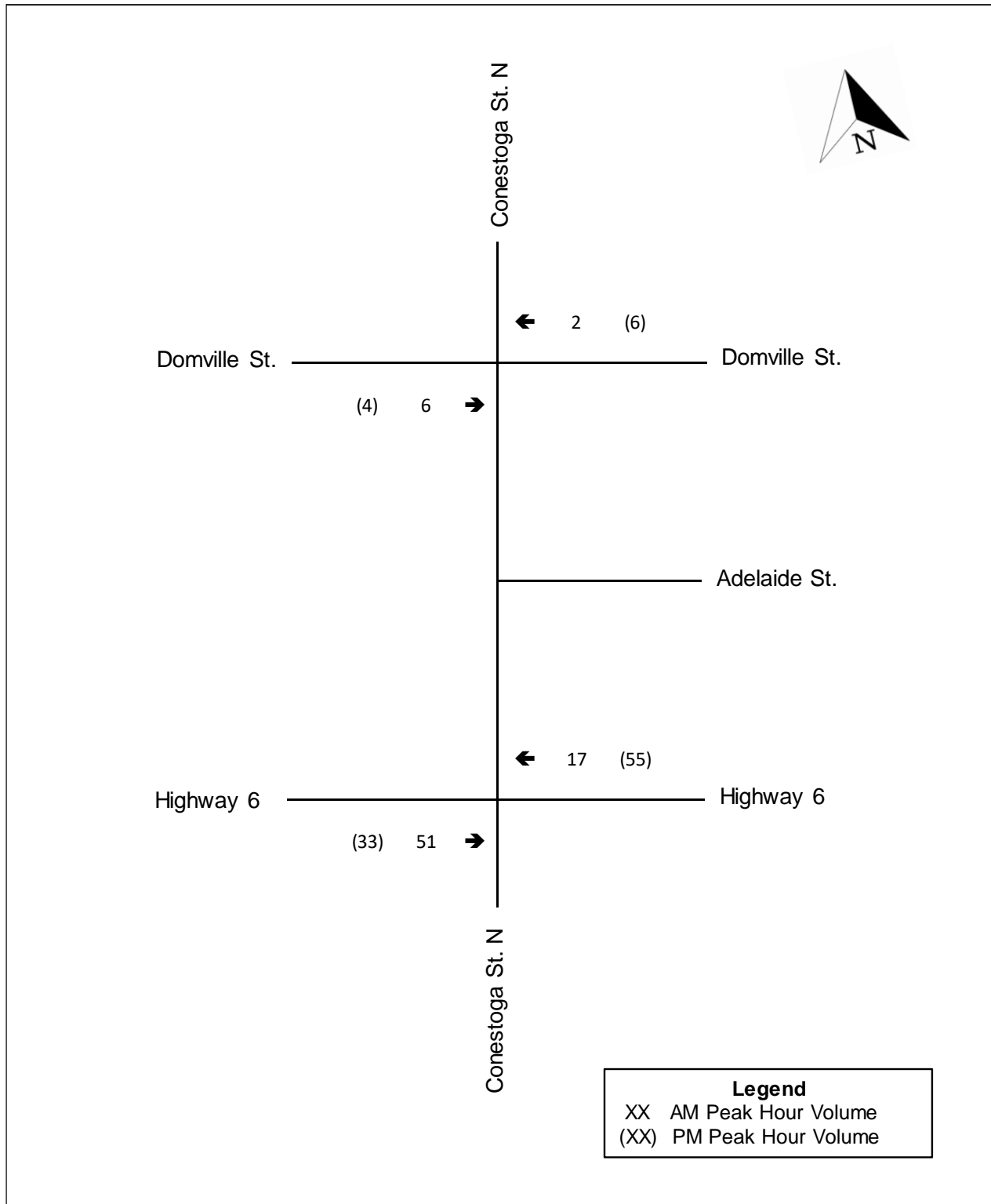


Figure 3: Background Development Trip Generation (2025)

### 4.3 Future Background Corridor Growth

Given the residential area east of Conestoga Street North is a mature and developed area, a 1% per annum growth rate was only applied to the through movements along Smith Street (Highway 6) and Domville Street, and not applied to the movements to/from the residential subdivision.

The resulting estimated 2023 and 2028 future background peak hour intersection traffic volumes during are shown in **Figure 4** and **Figure 5**, respectively.

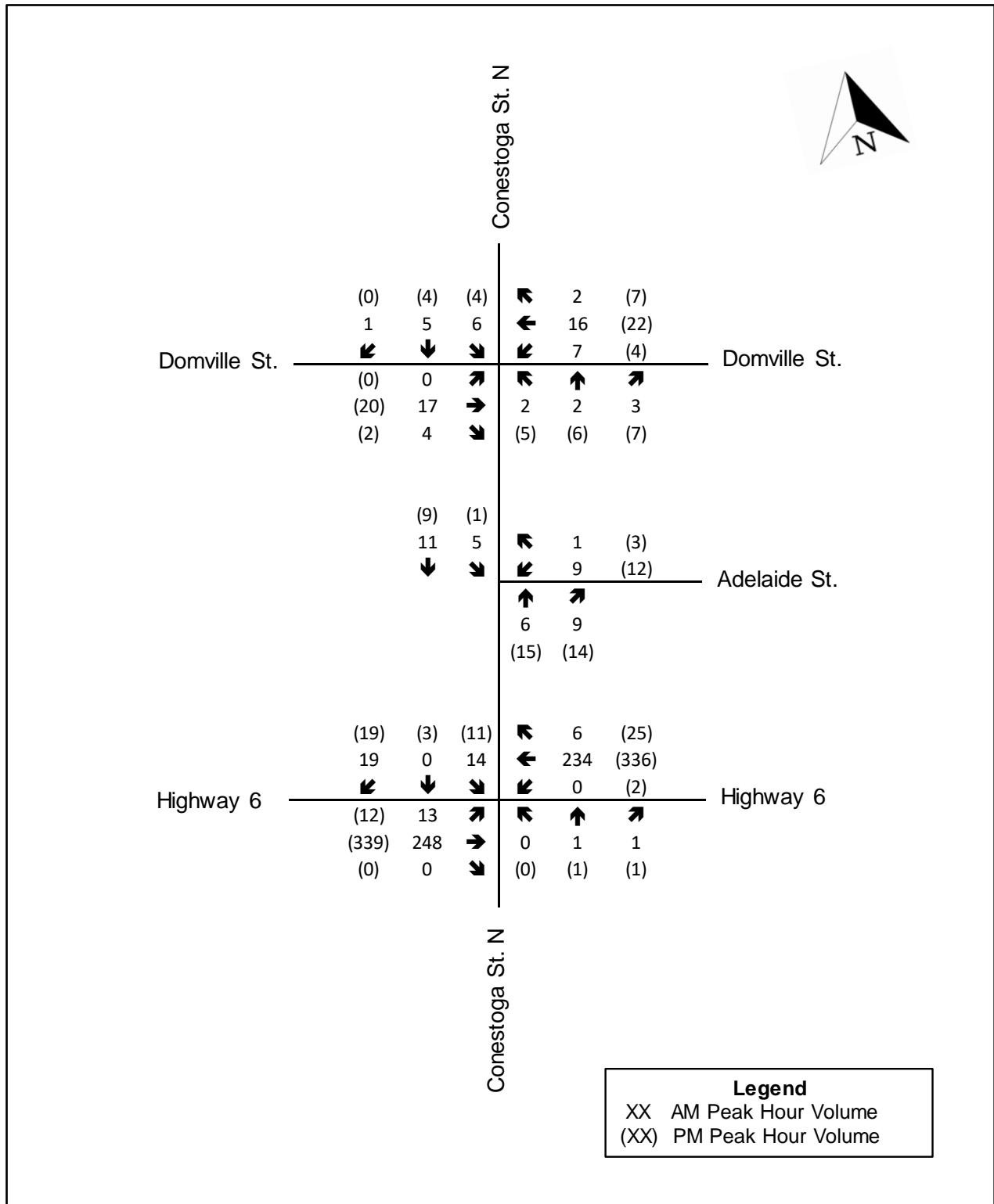


Figure 4: Future Growth 2023 Volumes

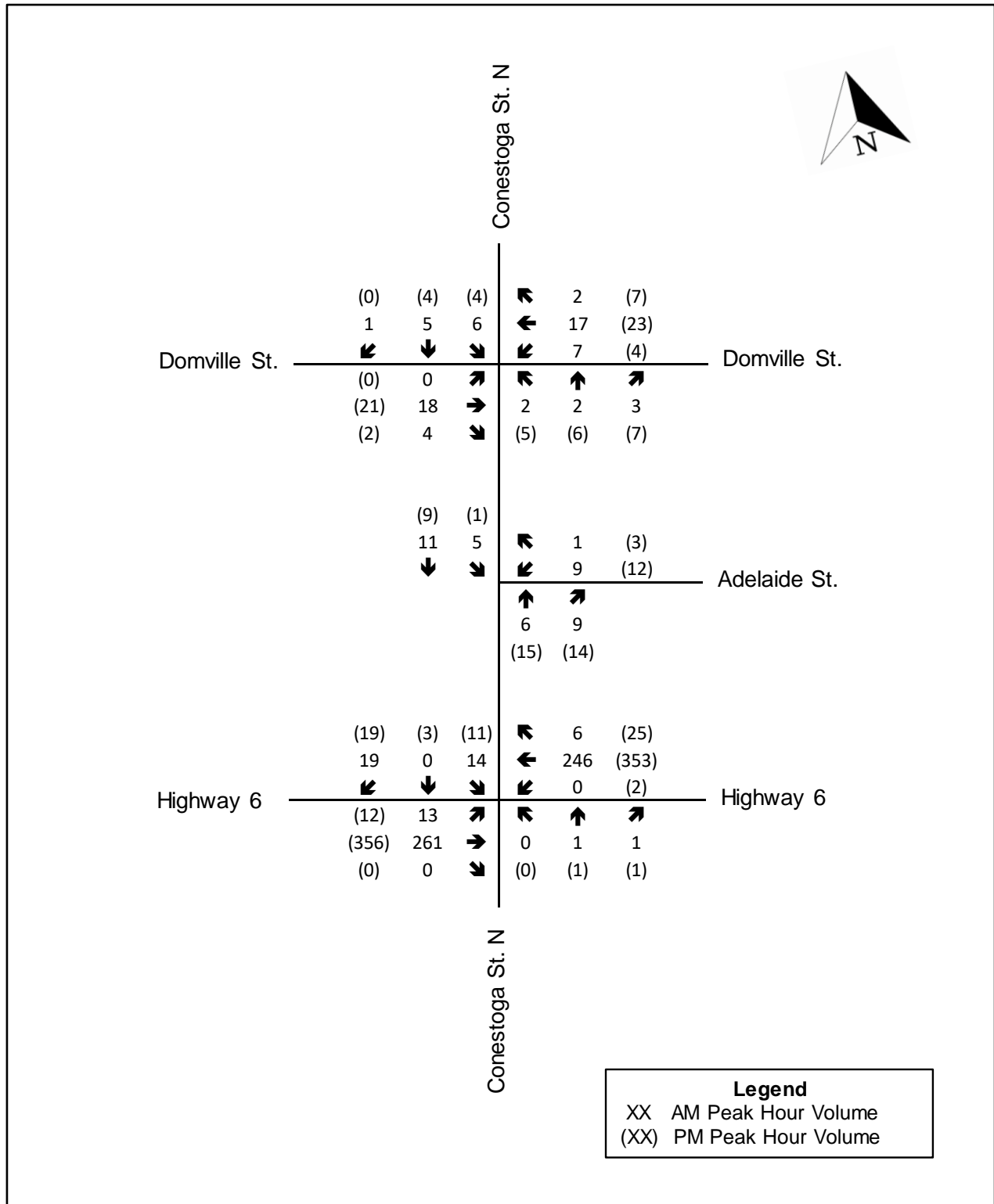


Figure 5: Future Growth 2028 Volumes

#### 4.4 Future Background Traffic Volumes

The future background intersection volumes are estimated by combining the background development traffic and the projected background corridor growth for each horizon year. As per consultation with Township staff, there are currently no background developments planned to be implemented by the 2023 horizon year, which means the anticipated background corridor growth encapsulates the total expected change in traffic volumes for the 2023 horizon year. However, with the 321 Domville Street development expected to be built-out by 2025, the trips generated by this development have been applied to the 2028 background corridor growth volumes.

The resulting 2028 future background intersection volumes for the weekday a.m. and p.m. peak hours are presented in **Figure 6**.

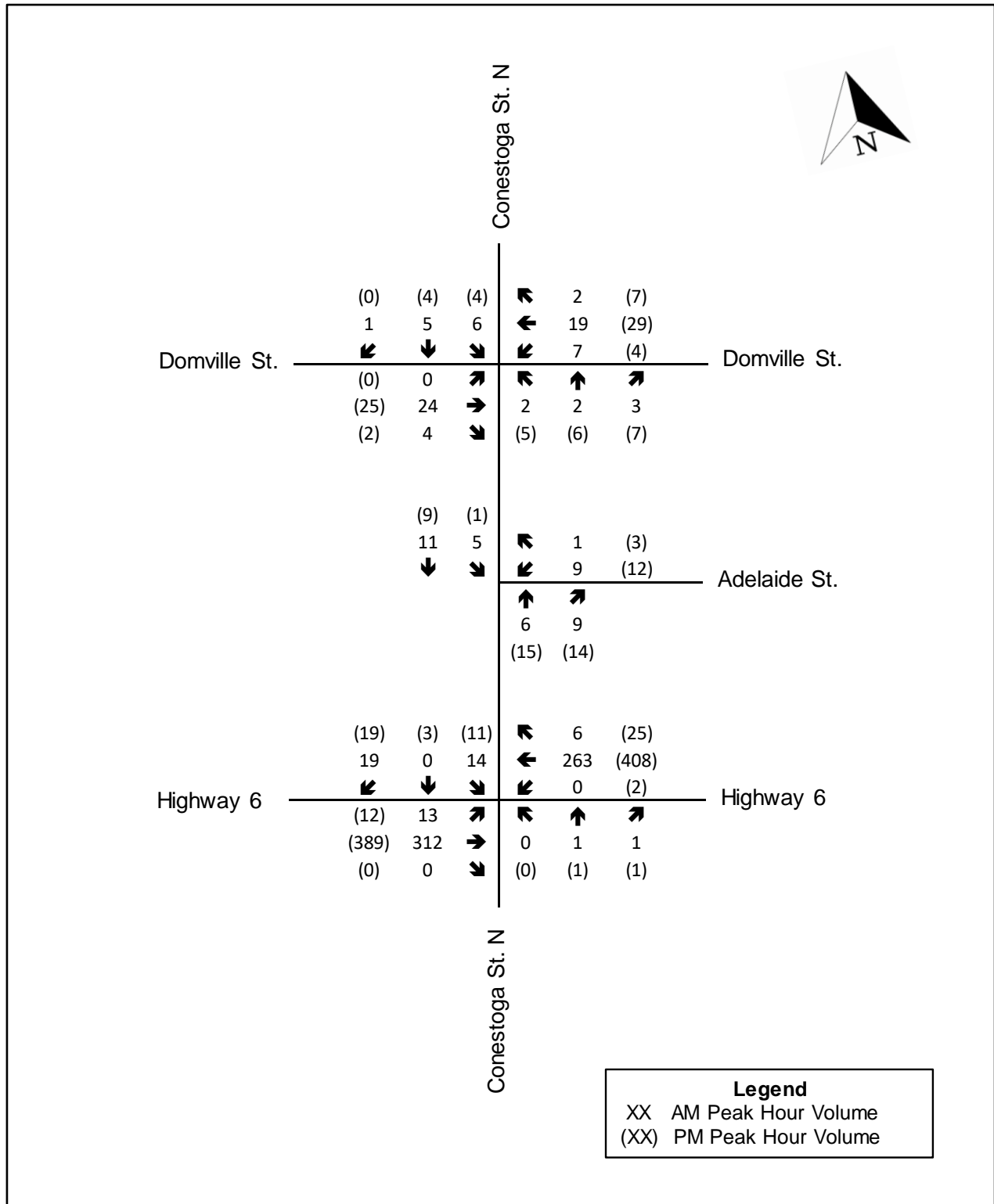


Figure 6: Future Background 2028 Volumes

## 5.0 Site Generated Traffic

The development proposal consists of 35 residential townhouses and the extension of Adelaide Street, which serves as the vehicular access to the site. The concept plan is provided in **Appendix D**. Trip Generation from the subject site was estimated utilizing ITE *Trip Generation Manual, 11<sup>th</sup> Edition*, referencing the ITE Land Use Code (LUC) #215 for “Single-Family Attached Housing”. As shown in **Table 3**, the proposed development is estimated to generate approximately 13 trips during the a.m. peak hour (4 inbound and 9 outbound) and approximately 17 trips during the p.m. peak hour (10 inbound and 7 outbound).

*Table 3: Site Traffic - Trip Generation Summary*

Peak Hour	Trip Equation	Total Trips	Inbound / Outbound
Weekday a.m.	$\text{Trips} = 0.52 (\text{units}) - 5.70$	13	4 / 9
Weekday p.m.	$\text{Trips} = 0.60 (\text{units}) - 3.93$	17	10 / 7

**Figure 7** illustrates the a.m. and p.m. peak hour volumes expected to be generated by the proposed development, reflective of the trip distribution percentages established in the 321 Domville Street TIS.

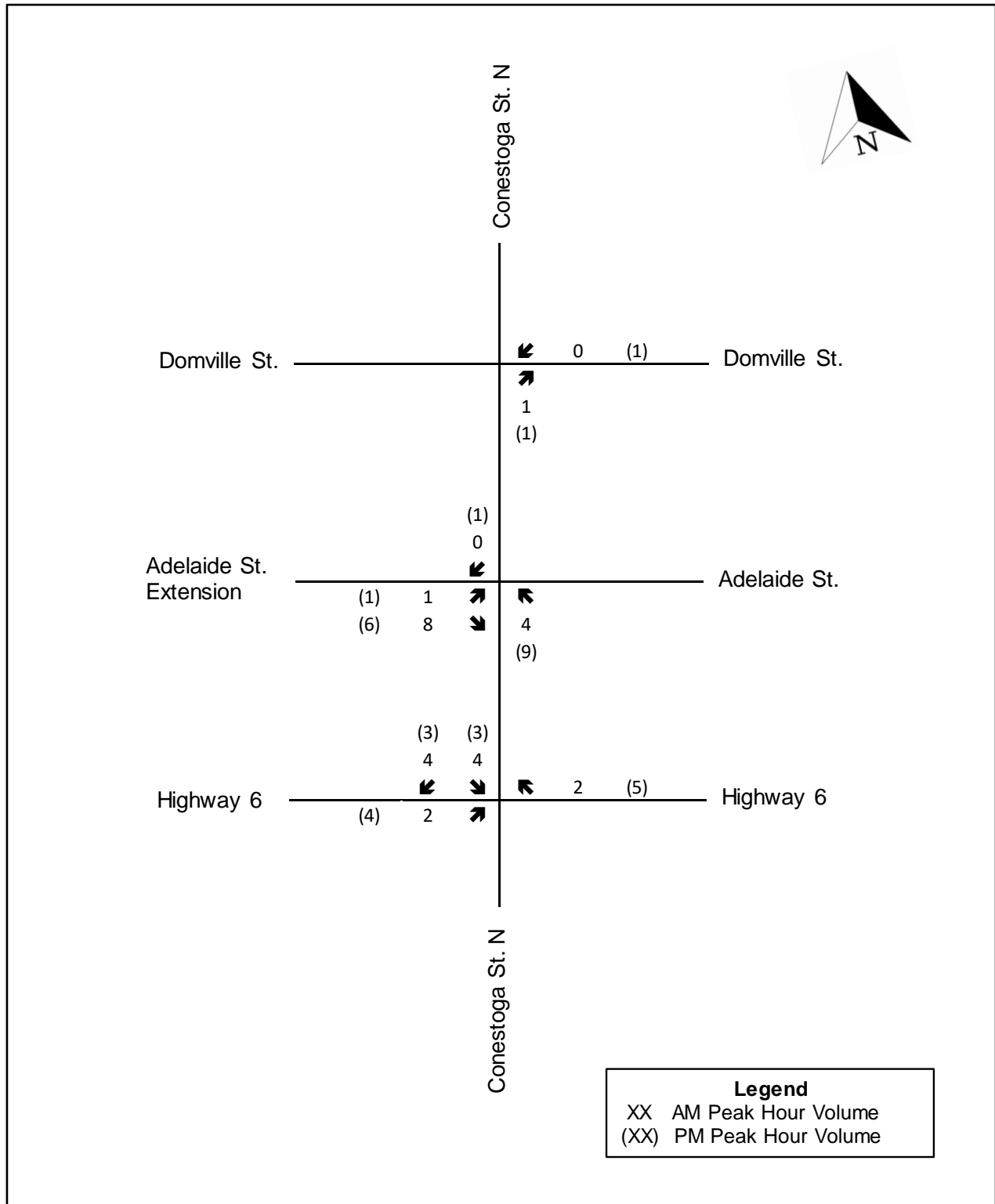


Figure 7: Site Traffic Volumes

## 6.0 Future Total Volumes

### 6.1 2023 Future Total Traffic Volumes

Future total volumes for the 2023 horizon year were estimated by adding the site generated traffic to the 2023 future background volumes. The resulting estimated 2023 future total traffic volumes for the a.m. and p.m. peak hours are shown in **Figure 8**.

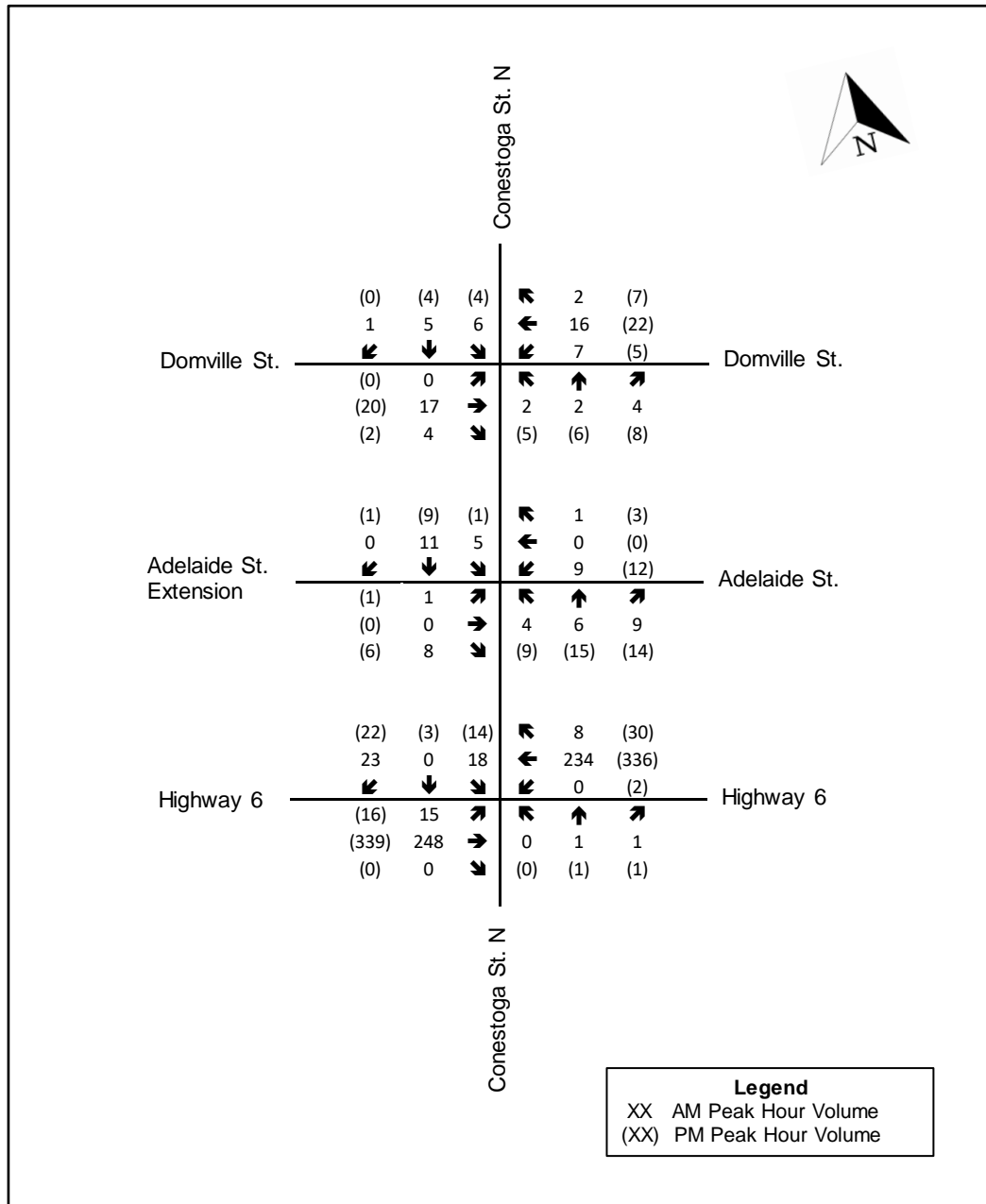


Figure 8: Future Total 2023 Volumes

## 6.2 2028 Future Total Traffic Volumes

Similarly, the 2028 future total traffic volumes consists of the site generated trips and the 2028 future background volume projections. However, the proposed site design indicates that the Adelaide Street extension will provide connection to the 321 Domville Street development, which will result in a redistribution of trips for the background development. Based on our review of the proposed Draft Plan of Subdivision for 321 Domville Street, it can be reasonably assumed that 35% of the vehicles headed eastbound will utilize the new Adelaide Street extension.

The expected change in traffic volumes can be seen in **Figure 9**, with the total estimated traffic volumes for the 2028 horizon year shown in **Figure 10**.

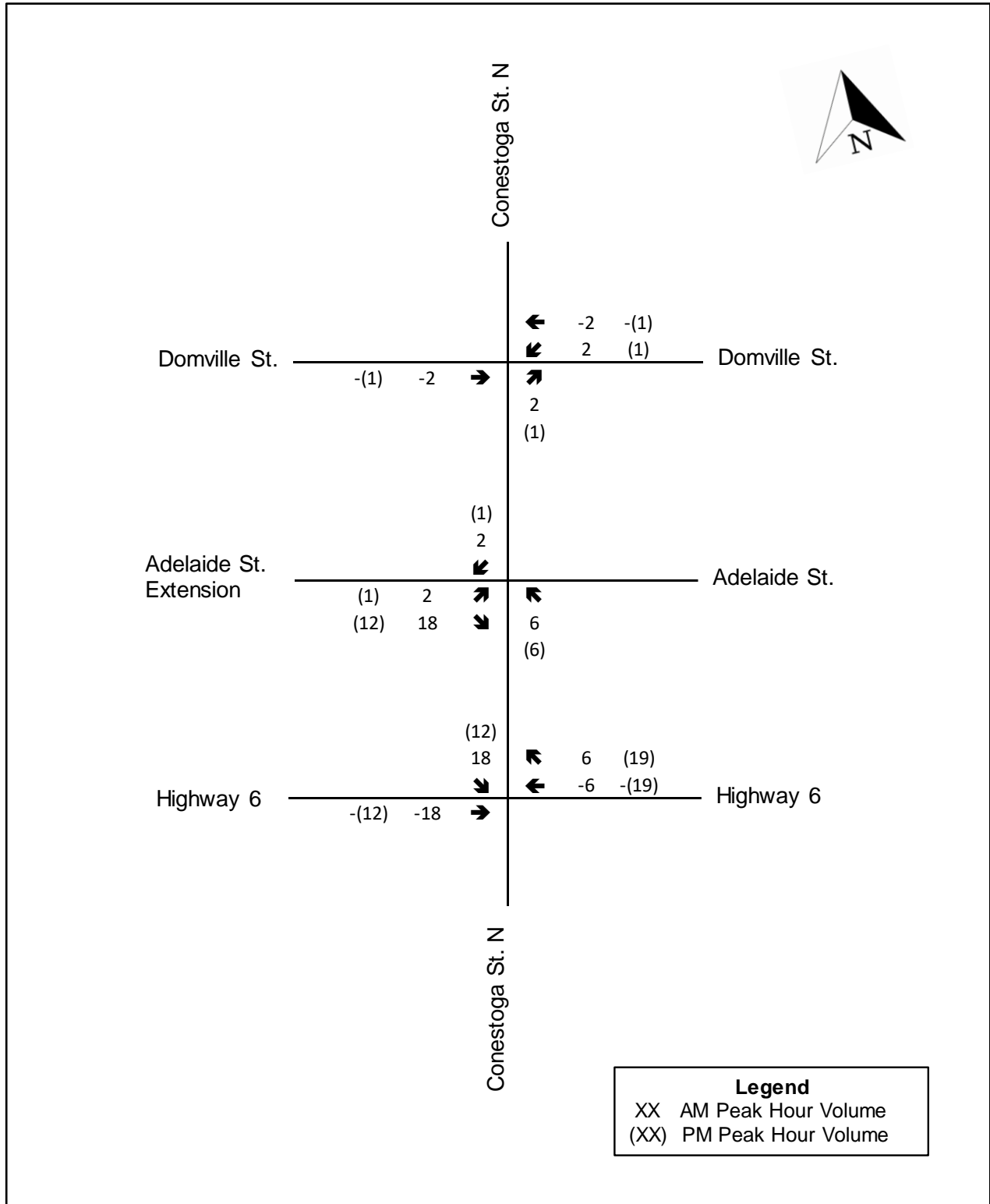


Figure 9: Trip Redistribution (Adelaide Street Extension)

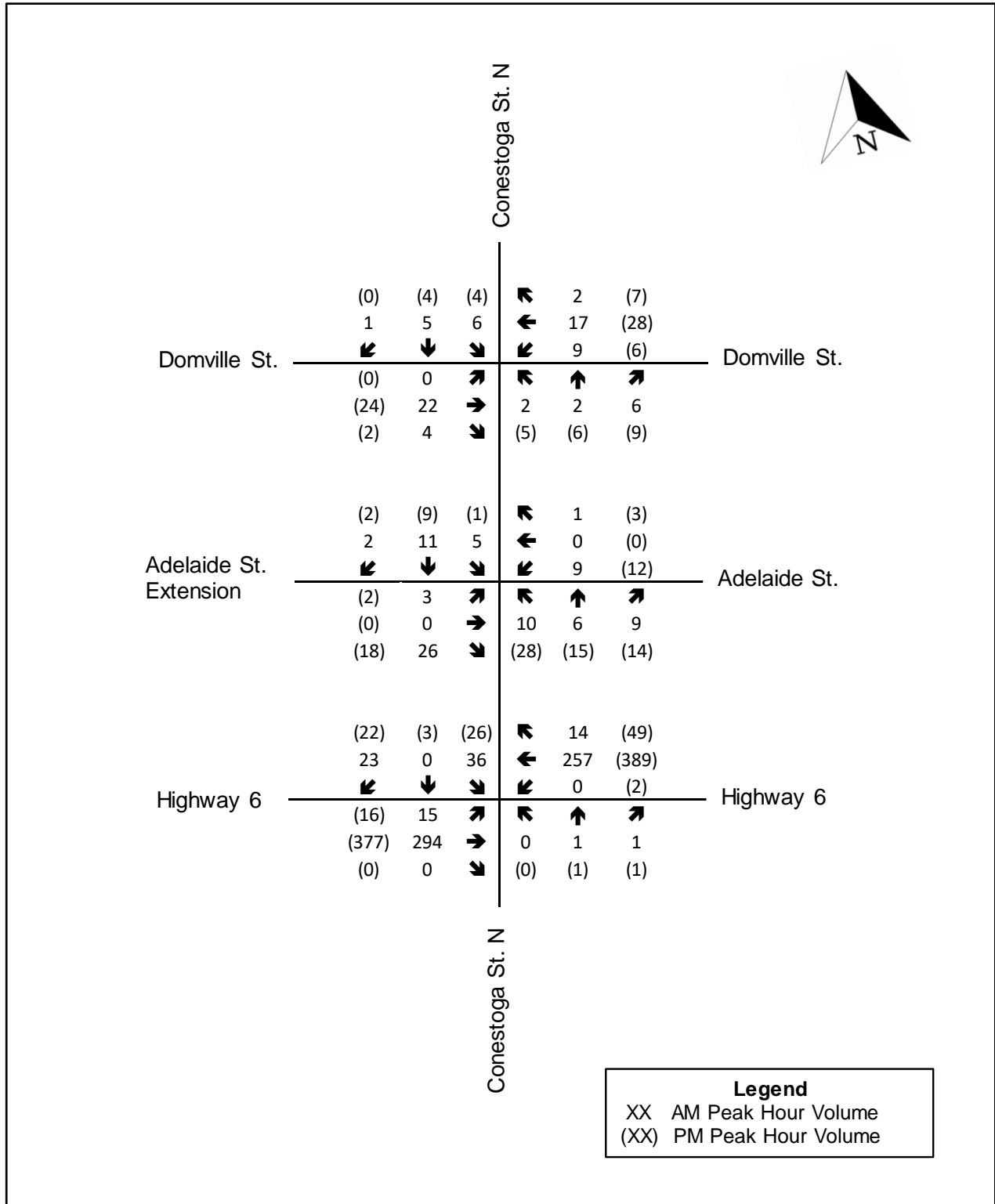


Figure 10: 2028 Future Total Traffic Conditions

## 7.0 Capacity Analysis

### 7.1 Methodology

The industry standard Synchro macroscopic traffic analysis software was utilized to analyse the intersections for the various horizon years. Key performance measures such as Level of Service (LOS), volume-to-capacity ratio (v/c ratio), and 95<sup>th</sup> percentile queuing were reported, and are defined below:

- **Average vehicle control delay** is used to characterize LOS for the entire intersection, an approach, or movement. Delay quantifies the variations in travel time and is also a surrogate measure of driver discomfort and fuel consumption.
- **V/c ratio** quantifies the degree to which the capacity is utilized by a defined lane group.
- **95<sup>th</sup> percentile queue** is the queue length which is expected to be exceeded only 5% of the time; it is common practice to identify preferred storage length requirements for auxiliary turn lanes at signalized intersections based on estimated peak hour 95<sup>th</sup> percentile queuing.

**Table 4** identifies the control delay thresholds (seconds of delay per vehicle) for each LOS based on Highway Capacity Manual (HCM) methodology.

*Table 4: Characteristics of Level of Service at Intersections*

LEVEL OF SERVICE (LOS)	CONTROL DELAY (seconds / vehicle)
	UNSIGNALIZED INTERSECTION
A	≤ 10
B	> 10 to 15
C	> 15 to 25
D	> 25 to 35
E	> 35 to 50
F	> 50

Detailed Highway Capacity Manual (HCM) output reports from the capacity analysis are provided in **Appendix E**.

## 7.2 Domville Street at Conestoga Street North

Table 5: Capacity Analysis Results – Domville Street at Conestoga Street North

SCENARIO	MOVE.	WEEKDAY PM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (VEH)	V/C	LOS	95TH % QUEUE (VEH)
Baseline 2022	Eastbound	0.00	A	<1 veh	0.00	A	<1 veh
	Westbound	0.01	A	<1 veh	0.00	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.01	A	<1 veh	0.01	A	<1 veh
Future Background 2023	Eastbound	0.00	A	<1 veh	0.00	A	<1 veh
	Westbound	0.01	A	<1 veh	0.00	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.01	A	<1 veh	0.01	A	<1 veh
Future Background 2028	Eastbound	0.00	A	<1 veh	0.00	A	<1 veh
	Westbound	0.01	A	<1 veh	0.00	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.01	A	<1 veh	0.01	A	<1 veh
Future Total 2023	Eastbound	0.00	A	<1 veh	0.00	A	<1 veh
	Westbound	0.01	A	<1 veh	0.00	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.01	A	<1 veh	0.01	A	<1 veh
Future Total 2028	Eastbound	0.00	A	<1 veh	0.00	A	<1 veh
	Westbound	0.01	A	<1 veh	0.00	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.01	A	<1 veh	0.01	A	<1 veh

As shown in **Table 5**, there is expected to be substantial reserve capacity (v/c ratios not exceeding 0.02), low levels of delay (delay not exceeding LOS “A”, or 10 seconds), and no queueing concerns, under existing and all future background conditions. With the addition of the site traffic, which consists of one trip in the a.m. peak hour and two trips in the p.m. peak hour, there is a negligible impact on traffic operations, with all movements maintaining the same measure of effectiveness under all future total conditions. Therefore, there are no recommendations to provide additional capacity at this intersection.

### 7.3 Adelaide Street at Conestoga Street North

Table 6: Capacity Analysis Results – Adelaide Street at Conestoga Street North

SCENARIO	MOVE.	WEEKDAY PM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (VEH)	V/C	LOS	95TH % QUEUE (VEH)
Baseline 2022	Westbound	0.01	A	<1 veh	0.02	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.00	A	<1 veh	0.00	A	<1 veh
Future Background 2023	Westbound	0.01	A	<1 veh	0.02	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.00	A	<1 veh	0.00	A	<1 veh
Future Background 2028	Westbound	0.01	A	<1 veh	0.02	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.00	A	<1 veh	0.00	A	<1 veh
Future Total 2023	Eastbound	0.01	A	<1 veh	0.01	A	<1 veh
	Westbound	0.01	A	<1 veh	0.02	A	<1 veh
	Northbound	0.00	A	<1 veh	0.01	A	<1 veh
	Southbound	0.00	A	<1 veh	0.00	A	<1 veh
Future Total 2028	Eastbound	0.03	A	<1 veh	0.02	A	<1 veh
	Westbound	0.01	A	<1 veh	0.02	A	<1 veh
	Northbound	0.01	A	<1 veh	0.02	A	<1 veh
	Southbound	0.00	A	<1 veh	0.00	A	<1 veh

As shown in **Table 6**, there is expected to be substantial reserve capacity (v/c ratios not exceeding 0.03), low levels of delay (delay not exceeding LOS “A”, or 10 seconds), and no queuing concerns, under existing and all future background conditions. With the addition of the site and redistributed traffic, there is a negligible impact on traffic operations, with all movements maintaining similar measures of effectiveness under all future total conditions. Therefore, there are no recommendations to provide additional capacity at this intersection.

## 7.4 Smith Street (Highway 6) at Conestoga Street North

Table 7: Capacity Analysis Results – Smith Street (Highway 6) at Conestoga Street North

SCENARIO	MOVE.	WEEKDAY PM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		V/C	LOS	95TH % QUEUE (VEH)	V/C	LOS	95TH % QUEUE (VEH)
Baseline 2022	Eastbound	0.01	A	<1 veh	0.01	A	<1 veh
	Westbound	0.00	A	<1 veh	0.00	A	<1 veh
	Northbound	0.00	B	<1 veh	0.00	B	<1 veh
	Southbound	0.06	B	<1 veh	0.08	B	<1 veh
Future Background 2023	Eastbound	0.01	A	<1 veh	0.01	A	<1 veh
	Westbound	0.00	A	<1 veh	0.00	A	<1 veh
	Northbound	0.00	B	<1 veh	0.00	B	<1 veh
	Southbound	0.06	B	<1 veh	0.08	B	<1 veh
Future Background 2028	Eastbound	0.01	A	<1 veh	0.01	A	<1 veh
	Westbound	0.00	A	<1 veh	0.00	A	<1 veh
	Northbound	0.00	B	<1 veh	0.01	B	<1 veh
	Southbound	0.07	B	<1 veh	0.09	C	<1 veh
Future Total 2023	Eastbound	0.01	A	<1 veh	0.01	A	<1 veh
	Westbound	0.00	A	<1 veh	0.00	A	<1 veh
	Northbound	0.00	B	<1 veh	0.00	B	<1 veh
	Southbound	0.08	B	<1 veh	0.09	B	<1 veh
Future Total 2028	Eastbound	0.01	A	<1 veh	0.02	A	<1 veh
	Westbound	0.00	A	<1 veh	0.00	A	<1 veh
	Northbound	0.00	B	<1 veh	0.01	B	<1 veh
	Southbound	0.14	B	<1 veh	0.16	C	<1 veh

As shown in **Table 7**, there is expected to be substantial reserve capacity (v/c ratios not exceeding 0.16), low levels of delay (delay not exceeding LOS “C”, or 15-25 seconds), and no queueing concerns, under existing and all future background conditions. With the addition of the site and redistributed traffic, there is a nominal impact on traffic operations, with all movements expected to operate with reserve capacity, minimal delays, and no queueing, under all future total conditions. Therefore, there are no recommendations to provide additional capacity at this intersection.

## 8.0 Summary of Findings

The main findings of our review are summarized as follows:

- The proposed townhouse development is estimated to generate approximately 13 trips during the a.m. peak hour (4 inbound and 9 outbound) and approximately 17 trips during the p.m. peak hour (10 inbound and 7 outbound);
- The analysis adopted future planning horizons of 2023 for full build-out of the subject development and 2028 for a 5-year horizon;
- Based on the results of the capacity analysis, the existing surrounding road network has ample capacity to accommodate the future site generated traffic; and
- There are no recommendations to improve the operational performance at any of the three unsignalized intersections surrounding the development.

## 9.0 Closing

Thank you for providing us with the opportunity to undertake this study. If there is any query related to this report, please feel free to contact Adam Mildenberger at 905-8181-2542 or by email at [AMildenberger@rvanderson.com](mailto:AMildenberger@rvanderson.com).

Yours very truly,

**R.V. ANDERSON ASSOCIATES LIMITED**



Adam Mildenberger, B.A., C.E.T.  
Transportation Planner



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## **APPENDIX A**

### **Traffic Count Raw Data**

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Turning Movement Count (3 . HWY 6 & FREDERICK ST (WELLINGTON RD 14))

Start Time	N Approach HWY 6						E Approach FREDERICK ST (WELLINGTON RD 14)						S Approach HWY 6						W Approach FREDERICK ST (WELLINGTON RD 14)						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
06:00:00	1	46	2	0	0	49	6	0	12	0	0	18	4	32	0	0	0	36	3	3	1	0	0	7	110	
06:15:00	2	57	2	0	0	61	4	3	10	0	4	17	2	27	0	0	0	29	1	0	4	0	0	5	112	
06:30:00	1	61	4	0	0	66	4	1	11	0	0	16	10	49	0	0	0	59	1	1	3	0	1	5	146	
06:45:00	3	60	5	0	0	68	8	0	10	0	0	18	12	69	2	0	0	83	2	2	3	0	1	7	176	544
07:00:00	2	51	0	0	2	53	2	2	12	0	2	16	5	29	0	0	0	34	0	2	5	0	1	7	110	544
07:15:00	3	63	0	0	0	66	3	3	19	0	1	25	11	57	0	0	0	68	0	1	3	0	0	4	163	595
07:30:00	5	74	5	0	0	84	6	4	12	0	0	22	5	51	0	0	0	56	1	3	4	0	1	8	170	619
07:45:00	3	52	5	0	0	60	5	4	13	0	2	22	6	56	0	0	0	62	2	3	6	0	3	11	155	598
08:00:00	3	46	4	0	2	53	2	0	11	0	1	13	9	42	1	0	2	52	0	1	2	0	0	3	121	609
08:15:00	1	60	4	0	0	65	3	5	8	0	3	16	13	48	0	0	0	61	0	2	4	0	2	6	148	594
08:30:00	2	53	3	0	0	58	3	1	12	0	0	16	9	43	2	0	0	54	2	0	1	0	2	3	131	555
08:45:00	2	53	4	0	0	59	4	2	14	0	3	20	24	49	2	0	0	75	3	1	2	0	1	6	160	560
09:00:00	3	42	5	0	1	50	5	1	12	0	2	18	16	51	0	0	1	67	0	1	0	0	4	1	136	575
09:15:00	0	44	2	0	1	46	3	4	22	0	0	29	5	44	1	0	2	50	1	2	5	0	2	8	133	560
09:30:00	4	53	8	0	0	65	8	1	15	0	0	24	11	52	0	0	0	63	0	2	2	0	0	4	156	585
09:45:00	7	70	3	0	1	80	6	5	21	0	0	32	11	57	2	0	1	70	0	3	4	0	1	7	189	614
***BREAK***																										
15:00:00	6	79	3	0	0	88	2	1	18	0	1	21	12	70	4	0	0	86	3	9	8	0	0	20	215	
15:15:00	9	70	5	0	2	84	2	2	13	0	0	17	15	59	4	0	0	78	8	7	5	0	2	20	199	
15:30:00	13	84	7	0	1	104	6	7	13	0	2	26	17	61	4	0	1	82	4	6	12	0	1	22	234	
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16:00:00	8	74	4	0	2	86	9	5	11	0	1	25	12	91	2	0	1	105	5	7	10	0	0	22	238	889
16:15:00	7	65	5	0	0	77	2	2	21	0	1	25	18	83	4	0	6	105	2	7	8	0	2	17	224	914
16:30:00	7	78	3	0	1	88	3	2	21	1	6	27	28	73	3	0	0	104	2	4	9	0	1	15	234	914
16:45:00	4	62	3	0	0	69	5	8	21	0	7	34	17	79	7	0	4	103	3	12	8	0	1	23	229	925
17:00:00	2	60	5	0	0	67	0	5	15	0	1	20	24	97	2	0	3	123	2	9	9	0	6	20	230	917
17:15:00	3	51	2	0	0	56	2	3	26	0	4	31	19	84	4	0	0	107	1	4	6	0	2	11	205	898
17:30:00	1	72	3	0	2	76	4	4	18	0	2	26	17	68	2	0	3	87	4	3	6	0	1	13	202	866
17:45:00	3	60	5	0	1	68	0	8	15	0	2	23	22	74	4	0	0	100	2	4	5	0	2	11	202	839
18:00:00	2	45	4	0	0	51	1	3	14	0	0	18	16	81	3	0	1	100	3	6	16	0	3	25	194	803
18:15:00	3	51	2	0	2	56	3	3	19	0	3	25	15	58	2	0	4	75	2	3	3	0	2	8	164	762
18:30:00	3	45	2	0	0	50	5	3	12	0	4	20	14	50	2	0	9	66	0	3	1	0	0	4	140	700
18:45:00	2	39	6	0	2	47	6	5	13	0	1	24	17	61	2	0	4	80	2	3	7	0	2	12	163	661
<b>Grand Total</b>	<b>121</b>	<b>1897</b>	<b>118</b>	<b>0</b>	<b>20</b>	<b>2136</b>	<b>125</b>	<b>100</b>	<b>479</b>	<b>1</b>	<b>56</b>	<b>705</b>	<b>434</b>	<b>1912</b>	<b>66</b>	<b>0</b>	<b>42</b>	<b>2412</b>	<b>61</b>	<b>116</b>	<b>177</b>	<b>0</b>	<b>45</b>	<b>354</b>	<b>5607</b>	<b>-</b>
<b>Approach%</b>	5.7%	88.8%	5.5%	0%	-	-	17.7%	14.2%	67.9%	0.1%	-	-	18%	79.3%	2.7%	0%	-	-	17.2%	32.8%	50%	0%	-	-	-	-
<b>Totals %</b>	2.2%	33.8%	2.1%	0%	-	38.1%	2.2%	1.8%	8.5%	0%	-	12.6%	7.7%	34.1%	1.2%	0%	-	43%	1.1%	2.1%	3.2%	0%	-	6.3%	-	-
<b>Heavy</b>	1	173	16	0	-	-	15	1	48	0	-	-	53	194	4	0	-	-	1	3	4	0	-	-	-	-
<b>Heavy %</b>	0.8%	9.1%	13.6%	0%	-	-	12%	1%	10%	0%	-	-	12.2%	10.1%	6.1%	0%	-	-	1.6%	2.6%	2.3%	0%	-	-	-	-
<b>Bicycles</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycle %</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)**

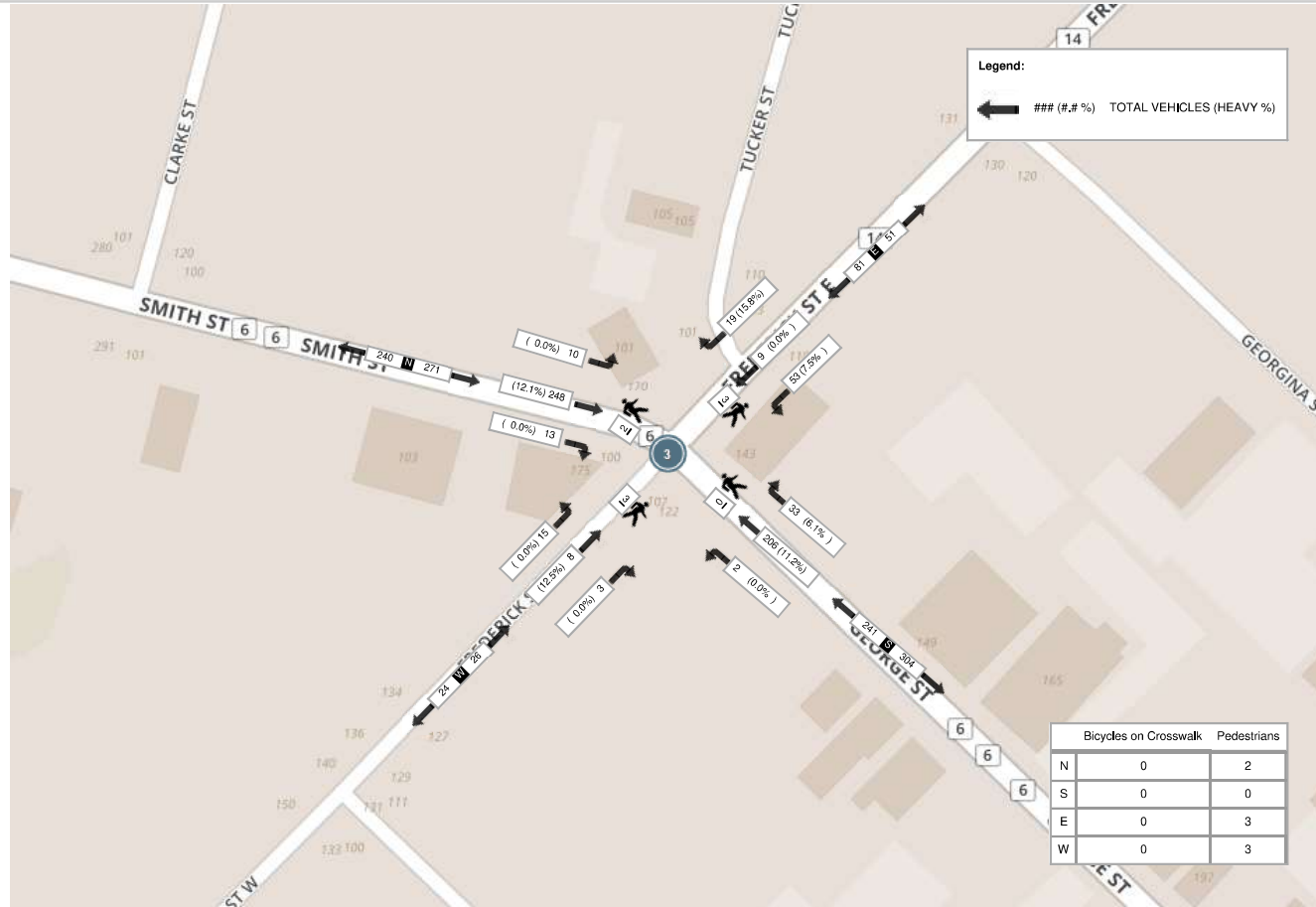
Start Time	N Approach HWY 6						E Approach FREDERICK ST (WELLINGTON RD 14)						S Approach HWY 6						W Approach FREDERICK ST (WELLINGTON RD 14)						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
06:45:00	3	60	5	0	0	68	8	0	10	0	0	18	12	69	2	0	0	83	2	2	3	0	1	7	176
07:00:00	2	51	0	0	2	53	2	2	12	0	2	16	5	29	0	0	0	34	0	2	5	0	1	7	110
07:15:00	3	63	0	0	0	66	3	3	19	0	1	25	11	57	0	0	0	68	0	1	3	0	0	4	163
07:30:00	5	74	5	0	0	84	6	4	12	0	0	22	5	51	0	0	0	56	1	3	4	0	1	8	170
<b>Grand Total</b>	<b>13</b>	<b>248</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>271</b>	<b>19</b>	<b>9</b>	<b>53</b>	<b>0</b>	<b>3</b>	<b>81</b>	<b>33</b>	<b>206</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>241</b>	<b>3</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>26</b>	<b>619</b>
<b>Approach%</b>	4.8%	91.5%	3.7%	0%	-	-	23.5%	11.1%	65.4%	0%	-	-	13.7%	85.5%	0.8%	0%	-	11.5%	30.8%	57.7%	0%	-	-	-	
<b>Totals %</b>	2.1%	40.1%	1.6%	0%	43.8%	-	3.1%	1.5%	8.6%	0%	13.1%	-	5.3%	33.3%	0.3%	0%	38.9%	0.5%	1.3%	2.4%	0%	4.2%	-	-	
<b>PHF</b>	0.65	0.84	0.5	0	0.81	-	0.59	0.56	0.7	0	0.81	-	0.69	0.75	0.25	0	0.73	0.38	0.67	0.75	0	0.81	-	-	
<b>Heavy</b>	0	30	0	0	30	-	3	0	4	0	7	-	2	23	0	0	25	0	1	0	0	1	-	-	
<b>Heavy %</b>	0%	12.1%	0%	0%	11.1%	-	15.8%	0%	7.5%	0%	8.6%	-	6.1%	11.2%	0%	0%	10.4%	0%	12.5%	0%	0%	3.8%	-	-	
<b>Lights</b>	13	218	10	0	241	-	16	9	49	0	74	-	30	183	2	0	215	3	7	15	0	25	-	-	
<b>Lights %</b>	100%	87.9%	100%	0%	88.9%	-	84.2%	100%	92.5%	0%	91.4%	-	90.9%	88.8%	100%	0%	89.2%	100%	87.5%	100%	0%	96.2%	-	-	
<b>Single-Unit Trucks</b>	0	23	0	0	23	-	0	0	3	0	3	-	1	11	0	0	12	0	1	0	0	1	-	-	
<b>Single-Unit Trucks %</b>	0%	9.3%	0%	0%	8.5%	-	0%	0%	5.7%	0%	3.7%	-	3%	5.3%	0%	0%	5%	0%	12.5%	0%	0%	3.8%	-	-	
<b>Buses</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	-	
<b>Buses %</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	
<b>Articulated Trucks</b>	0	7	0	0	7	-	3	0	1	0	4	-	1	12	0	0	13	0	0	0	0	0	-	-	
<b>Articulated Trucks %</b>	0%	2.8%	0%	0%	2.6%	-	15.8%	0%	1.9%	0%	4.9%	-	3%	5.8%	0%	0%	5.4%	0%	0%	0%	0%	0%	-	-	
<b>Bicycles on Road</b>	0	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	1	0	0	0	0	0	-	-	
<b>Bicycles on Road %</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	3%	0%	0%	0%	0.4%	0%	0%	0%	0%	0%	-	-	
<b>Pedestrians</b>	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	3	-	-	
<b>Pedestrians%</b>	-	-	-	-	25%	-	-	-	-	-	37.5%	-	-	-	-	-	0%	-	-	-	-	37.5%	-	-	
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	
<b>Bicycles on Crosswalk%</b>	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	-	-	



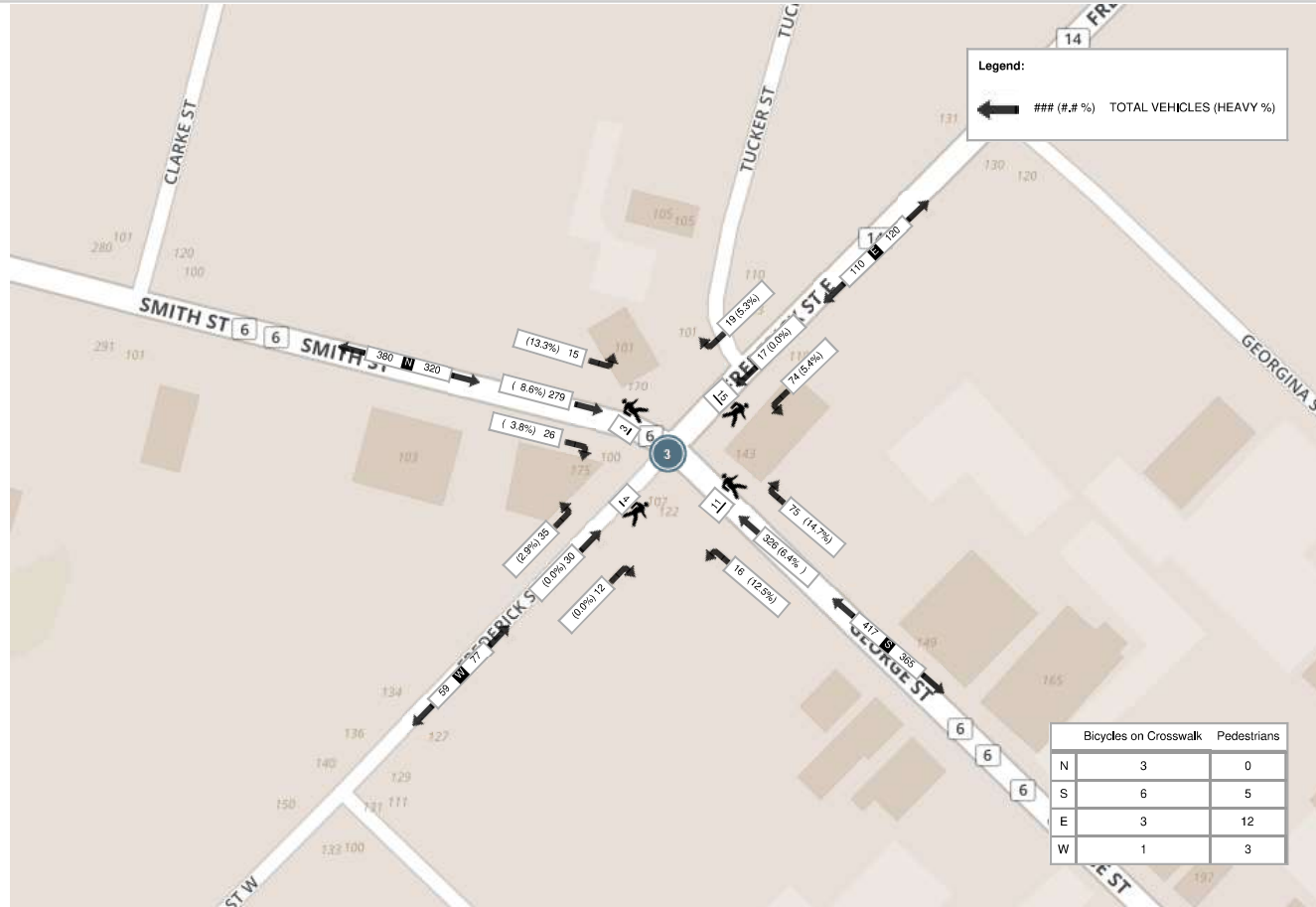
**Peak Hour: 04:00 PM - 05:00 PM Weather: Fair (27.22°C)**

Start Time	N Approach HWY 6						E Approach FREDERICK ST (WELLINGTON RD 14)						S Approach HWY 6						W Approach FREDERICK ST (WELLINGTON RD 14)						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
16:00:00	8	74	4	0	2	86	9	5	11	0	1	25	12	91	2	0	1	105	5	7	10	0	0	22	238
16:15:00	7	65	5	0	0	77	2	2	21	0	1	25	18	83	4	0	6	105	2	7	8	0	2	17	224
16:30:00	7	78	3	0	1	88	3	2	21	1	6	27	28	73	3	0	0	104	2	4	9	0	1	15	234
16:45:00	4	62	3	0	0	69	5	8	21	0	7	34	17	79	7	0	4	103	3	12	8	0	1	23	229
<b>Grand Total</b>	<b>26</b>	<b>279</b>	<b>15</b>	<b>0</b>	<b>3</b>	<b>320</b>	<b>19</b>	<b>17</b>	<b>74</b>	<b>1</b>	<b>15</b>	<b>111</b>	<b>75</b>	<b>326</b>	<b>16</b>	<b>0</b>	<b>11</b>	<b>417</b>	<b>12</b>	<b>30</b>	<b>35</b>	<b>0</b>	<b>4</b>	<b>77</b>	<b>925</b>
<b>Approach%</b>	8.1%	87.2%	4.7%	0%	-	-	17.1%	15.3%	66.7%	0.9%	-	-	18%	78.2%	3.8%	0%	-	-	15.6%	39%	45.5%	0%	-	-	-
<b>Totals %</b>	2.8%	30.2%	1.6%	0%	34.6%	2.1%	1.8%	8%	0.1%	12%	8.1%	35.2%	1.7%	0%	45.1%	1.3%	3.2%	3.8%	0%	8.3%	-	-	-	-	
<b>PHF</b>	0.81	0.89	0.75	0	0.91	0.53	0.53	0.88	0.25	0.82	0.67	0.9	0.57	0	0.99	0.6	0.63	0.88	0	0.84	-	-	-	-	
<b>Heavy</b>	1	24	2	0	27	1	0	4	0	5	11	21	2	0	34	0	0	1	0	1	-	-	-	-	
<b>Heavy %</b>	3.8%	8.6%	13.3%	0%	8.4%	5.3%	0%	5.4%	0%	4.5%	14.7%	6.4%	12.5%	0%	8.2%	0%	0%	2.9%	0%	1.3%	-	-	-	-	
<b>Lights</b>	25	255	13	0	293	18	17	70	1	106	64	305	14	0	383	12	29	34	0	75	-	-	-	-	
<b>Lights %</b>	96.2%	91.4%	86.7%	0%	91.6%	94.7%	100%	94.6%	100%	95.5%	85.3%	93.6%	87.5%	0%	91.8%	100%	96.7%	97.1%	0%	97.4%	-	-	-	-	
<b>Single-Unit Trucks</b>	0	10	0	0	10	1	0	2	0	3	5	8	1	0	14	0	0	0	0	0	-	-	-	-	
<b>Single-Unit Trucks %</b>	0%	3.6%	0%	0%	3.1%	5.3%	0%	2.7%	0%	2.7%	6.7%	2.5%	6.3%	0%	3.4%	0%	0%	0%	0%	0%	-	-	-	-	
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
<b>Buses %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	
<b>Articulated Trucks</b>	1	14	2	0	17	0	0	2	0	2	6	13	1	0	20	0	0	1	0	1	-	-	-	-	
<b>Articulated Trucks %</b>	3.8%	5%	13.3%	0%	5.3%	0%	0%	2.7%	0%	1.8%	8%	4%	6.3%	0%	4.8%	0%	0%	2.9%	0%	1.3%	-	-	-	-	
<b>Bicycles on Road</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-	-	-	-	
<b>Bicycles on Road %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1.3%	-	-	-	-	
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	12	-	-	-	5	-	-	-	-	3	-	-	-	-	-	
<b>Pedestrians %</b>	-	-	-	-	0%	-	-	-	-	36.4%	-	-	-	15.2%	-	-	-	-	9.1%	-	-	-	-	-	
<b>Bicycles on Crosswalk</b>	-	-	-	-	3	-	-	-	-	3	-	-	-	6	-	-	-	-	1	-	-	-	-	-	
<b>Bicycles on Crosswalk %</b>	-	-	-	-	9.1%	-	-	-	-	9.1%	-	-	-	18.2%	-	-	-	-	3%	-	-	-	-	-	

Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Fair (27.22°C)





Turning Movement Count (2 . HWY 6 & CONESTOGA ST)

Start Time	N Approach CONESTOGA ST						E Approach HWY 6						S Approach CONESTOGA ST						W Approach HWY 6						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W	Peds W:	Approach Total		
06:00:00	9	0	3	0	0	12	0	39	0	0	0	39	0	0	0	0	0	0	0	39	1	0	0	40	91	
06:15:00	7	0	1	0	1	8	0	38	0	0	1	38	0	0	0	0	3	0	0	63	3	0	0	66	112	
06:30:00	7	0	4	0	0	11	1	53	0	0	0	54	0	0	1	0	0	1	0	60	0	0	0	60	126	
06:45:00	7	0	5	0	0	12	1	81	0	0	0	82	1	1	0	0	0	2	0	63	5	0	0	68	164	493
07:00:00	5	0	4	0	1	9	3	33	0	0	0	36	0	0	0	0	2	0	0	51	3	0	1	54	99	501
07:15:00	3	0	4	0	0	7	2	59	0	0	0	61	0	0	0	0	0	0	0	62	1	0	0	63	131	520
07:30:00	4	0	1	0	0	5	0	59	0	0	0	59	0	0	0	0	0	0	0	70	4	0	0	74	138	532
07:45:00	4	0	2	0	0	6	4	63	0	0	1	67	0	0	0	0	3	0	0	59	3	0	0	62	135	503
08:00:00	2	0	1	0	0	3	2	42	0	0	1	44	0	0	0	0	3	0	0	52	1	0	0	53	100	504
08:15:00	2	0	3	0	0	5	1	57	0	0	0	58	0	0	0	0	2	0	0	68	3	0	0	71	134	507
08:30:00	3	0	1	0	0	4	1	51	0	0	0	52	0	0	0	0	0	0	0	53	1	0	0	54	110	479
08:45:00	4	0	3	0	0	7	4	52	0	0	0	56	0	0	0	0	3	0	0	57	2	0	0	59	122	466
09:00:00	6	0	2	0	2	8	0	53	0	0	0	53	0	0	0	0	1	0	0	42	8	0	2	50	111	477
09:15:00	4	0	2	0	1	6	5	49	0	0	1	54	0	0	0	0	2	0	0	38	7	0	0	45	105	448
09:30:00	6	0	2	0	0	8	3	59	1	0	1	63	0	1	0	0	2	1	0	68	3	0	0	71	143	481
09:45:00	5	1	5	0	0	11	3	62	0	0	0	65	0	1	0	0	1	1	0	73	5	0	0	78	155	514
***BREAK***																										
15:00:00	5	0	3	0	0	8	7	63	1	0	3	71	0	0	0	0	3	0	1	80	6	0	0	87	166	
15:15:00	6	0	4	0	1	10	9	58	1	0	0	68	0	1	0	0	0	1	0	92	4	0	0	96	175	
15:30:00	4	0	2	0	0	6	3	74	1	0	0	78	1	1	0	0	0	2	0	102	3	0	0	105	191	
15:45:00	5	0	6	0	0	11	6	71	0	1	0	78	0	0	0	0	2	0	0	85	1	0	0	86	175	707
16:00:00	4	1	1	0	0	6	12	98	0	0	0	110	0	0	0	0	2	0	0	75	3	0	0	78	194	735
16:15:00	6	2	2	0	0	10	4	90	1	0	0	95	0	0	0	0	1	0	0	74	5	0	0	79	184	744
16:30:00	4	0	0	0	0	4	3	82	0	0	0	85	1	0	0	0	1	1	0	82	6	0	0	88	178	731
16:45:00	5	0	4	0	2	9	5	84	1	0	2	90	0	1	0	0	2	1	0	57	9	0	3	66	166	722
17:00:00	6	0	1	0	1	7	8	92	0	0	0	100	1	0	0	0	5	1	0	66	0	0	1	66	174	702
17:15:00	5	0	2	0	0	7	7	79	0	0	3	86	0	0	0	0	4	0	0	55	5	0	1	60	153	671
17:30:00	3	0	5	0	0	8	6	61	3	0	1	70	1	0	0	0	4	1	0	65	5	0	0	70	149	642
17:45:00	2	0	4	0	0	6	3	72	0	0	1	75	1	1	1	0	4	3	0	61	4	0	0	65	149	625
18:00:00	3	0	5	0	0	8	8	85	0	0	0	93	0	0	0	0	1	0	0	50	4	0	0	54	155	606
18:15:00	4	0	2	0	0	6	6	55	1	0	2	62	0	0	0	0	3	0	0	48	4	0	0	52	120	573
18:30:00	2	1	6	0	0	9	4	47	1	0	1	52	0	0	0	0	1	0	0	49	1	0	0	50	111	535
18:45:00	3	0	2	0	3	5	3	67	0	0	7	70	1	0	0	0	11	1	0	35	3	0	0	38	114	500
<b>Grand Total</b>	<b>145</b>	<b>5</b>	<b>92</b>	<b>0</b>	<b>12</b>	<b>242</b>	<b>124</b>	<b>2028</b>	<b>11</b>	<b>1</b>	<b>25</b>	<b>2164</b>	<b>7</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>66</b>	<b>16</b>	<b>1</b>	<b>1994</b>	<b>113</b>	<b>0</b>	<b>8</b>	<b>2108</b>	<b>4530</b>	<b>-</b>
<b>Approach%</b>	59.9%	2.1%	38%	0%	-	-	5.7%	93.7%	0.5%	0%	-	-	43.8%	43.8%	12.5%	0%	-	0%	94.6%	5.4%	0%	-	-	-	-	-
<b>Totals %</b>	3.2%	0.1%	2%	0%	5.3%	5.3%	2.7%	44.8%	0.2%	0%	47.8%	47.8%	0.2%	0.2%	0%	0%	0.4%	0%	44%	2.5%	0%	46.5%	-	-	-	-
<b>Heavy</b>	0	0	3	0	-	-	3	210	0	0	-	-	0	1	0	0	-	0	183	0	0	-	-	-	-	-
<b>Heavy %</b>	0%	0%	3.3%	0%	-	-	2.4%	10.4%	0%	0%	-	-	0%	14.3%	0%	0%	-	0%	9.2%	0%	0%	-	-	-	-	-
<b>Bicycles</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycle %</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)

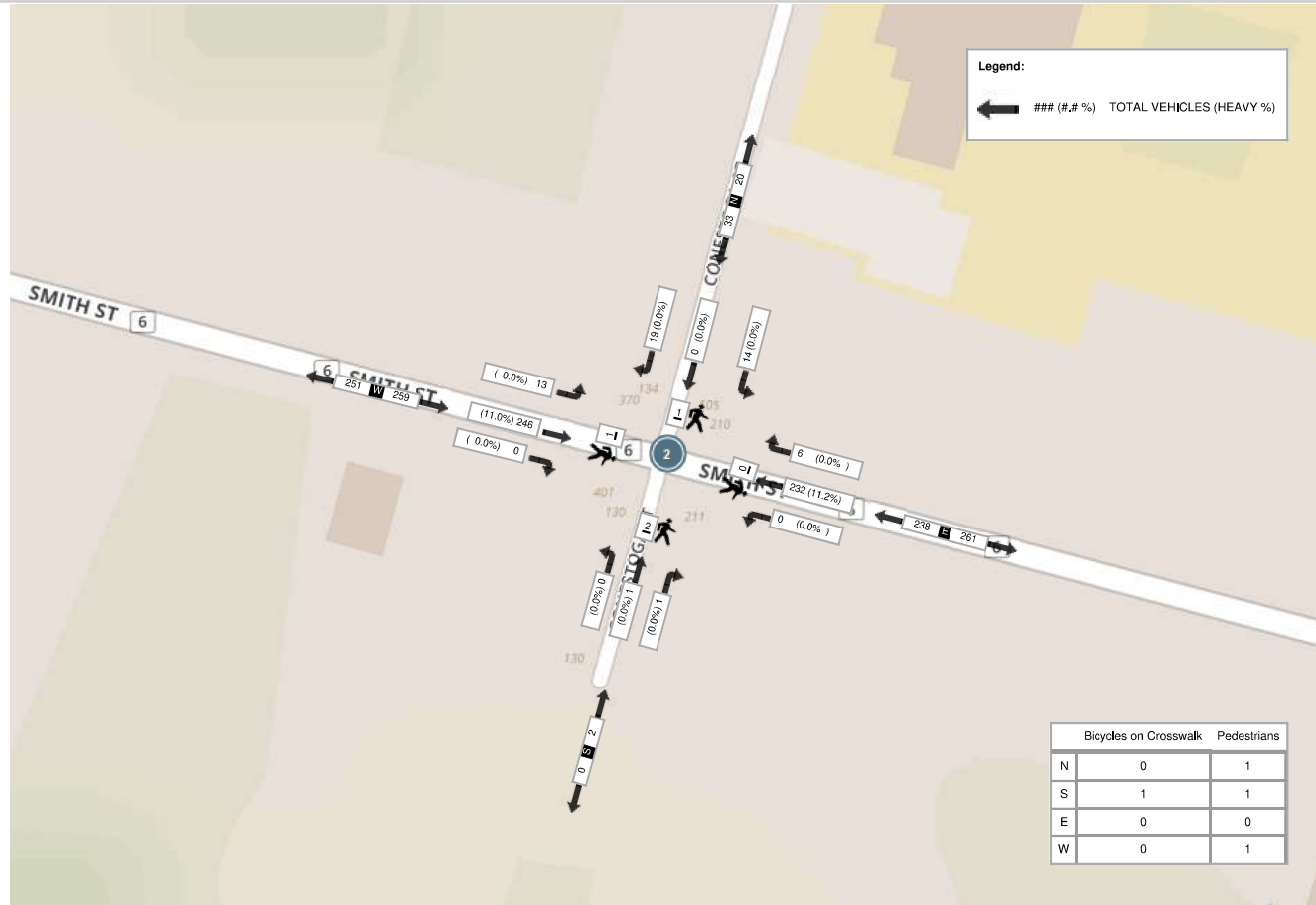
Start Time	N Approach CONESTOGA ST						E Approach HWY 6						S Approach CONESTOGA ST						W Approach HWY 6						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
06:45:00	7	0	5	0	0	12	1	81	0	0	0	82	1	1	0	0	0	2	0	63	5	0	0	68	164
07:00:00	5	0	4	0	1	9	3	33	0	0	0	36	0	0	0	0	2	0	0	51	3	0	1	54	99
07:15:00	3	0	4	0	0	7	2	59	0	0	0	61	0	0	0	0	0	0	0	62	1	0	0	63	131
07:30:00	4	0	1	0	0	5	0	59	0	0	0	59	0	0	0	0	0	0	0	70	4	0	0	74	138
<b>Grand Total</b>	<b>19</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>33</b>	<b>6</b>	<b>232</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>238</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>246</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>259</b>	<b>532</b>
<b>Approach%</b>	57.6%	0%	42.4%	0%	-	-	2.5%	97.5%	0%	0%	-	-	50%	50%	0%	0%	-	-	0%	95%	5%	0%	-	-	-
<b>Totals %</b>	3.6%	0%	2.6%	0%	6.2%	6.2%	1.1%	43.6%	0%	0%	44.7%	44.7%	0.2%	0.2%	0%	0%	0.4%	0%	46.2%	2.4%	0%	48.7%	48.7%	-	
<b>PHF</b>	0.68	0	0.7	0	0.69	0.69	0.5	0.72	0	0	0.73	0.73	0.25	0.25	0	0	0.25	0	0.88	0.65	0	0.88	0.88	-	
<b>Heavy</b>	0	0	0	0	0	0	0	26	0	0	26	26	0	0	0	0	0	0	27	0	0	27	27	-	
<b>Heavy %</b>	0%	0%	0%	0%	0%	0%	0%	11.2%	0%	0%	10.9%	10.9%	0%	0%	0%	0%	0%	0%	11%	0%	0%	10.4%	10.4%	-	
<b>Lights</b>	18	0	14	0	32	32	6	206	0	0	212	212	1	1	0	0	2	0	219	13	0	232	232	-	
<b>Lights %</b>	94.7%	0%	100%	0%	97%	97%	100%	88.8%	0%	0%	89.1%	89.1%	100%	100%	0%	0%	100%	0%	89%	100%	0%	89.6%	89.6%	-	
<b>Single-Unit Trucks</b>	0	0	0	0	0	0	0	11	0	0	11	11	0	0	0	0	0	0	21	0	0	21	21	-	
<b>Single-Unit Trucks %</b>	0%	0%	0%	0%	0%	0%	0%	4.7%	0%	0%	4.6%	4.6%	0%	0%	0%	0%	0%	0%	8.5%	0%	0%	8.1%	8.1%	-	
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Buses %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
<b>Articulated Trucks</b>	0	0	0	0	0	0	0	15	0	0	15	15	0	0	0	0	0	0	6	0	0	6	6	-	
<b>Articulated Trucks %</b>	0%	0%	0%	0%	0%	0%	0%	6.5%	0%	0%	6.3%	6.3%	0%	0%	0%	0%	0%	0%	2.4%	0%	0%	2.3%	2.3%	-	
<b>Bicycles on Road</b>	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Bicycles on Road %</b>	5.3%	0%	0%	0%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
<b>Pedestrians</b>	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
<b>Pedestrians %</b>	-	-	-	-	25%	-	-	-	-	0%	-	-	-	-	25%	-	-	-	-	-	-	25%	-	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-
<b>Bicycles on Crosswalk %</b>	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	25%	-	-	-	-	-	-	0%	-	-	-



Peak Hour: 03:30 PM - 04:30 PM Weather: Fair (27.22°C)

Start Time	N Approach CONESTOGA ST						E Approach HWY 6						S Approach CONESTOGA ST						W Approach HWY 6						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
15:30:00	4	0	2	0	0	6	3	74	1	0	0	78	1	1	0	0	0	2	0	102	3	0	0	105	191
15:45:00	5	0	6	0	0	11	6	71	0	1	0	78	0	0	0	0	2	0	0	85	1	0	0	86	175
16:00:00	4	1	1	0	0	6	12	98	0	0	0	110	0	0	0	0	2	0	0	75	3	0	0	78	194
16:15:00	6	2	2	0	0	10	4	90	1	0	0	95	0	0	0	0	1	0	0	74	5	0	0	79	184
<b>Grand Total</b>	<b>19</b>	<b>3</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>25</b>	<b>333</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>361</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>336</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>348</b>	<b>744</b>
<b>Approach%</b>	57.6%	9.1%	33.3%	0%	-	-	6.9%	92.2%	0.6%	0.3%	-	50%	50%	0%	0%	-	0%	96.6%	3.4%	0%	-	-	-	-	
<b>Totals %</b>	2.6%	0.4%	1.5%	0%	4.4%	4.4%	3.4%	44.8%	0.3%	0.1%	48.5%	0.1%	0.1%	0%	0%	0.3%	0%	45.2%	1.6%	0%	46.8%	-	-	-	
<b>PHF</b>	0.79	0.38	0.46	0	0.75	0.75	0.52	0.85	0.5	0.25	0.82	0.25	0.25	0	0	0.25	0	0.82	0.6	0	0.83	-	-	-	
<b>Heavy</b>	0	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	24	0	0	24	-	-	-	
<b>Heavy %</b>	0%	0%	0%	0%	0%	0%	0%	6.9%	0%	0%	6.4%	0%	0%	0%	0%	0%	0%	7.1%	0%	0%	6.9%	-	-	-	
<b>Lights</b>	18	3	11	0	0	32	25	310	2	1	338	1	1	0	0	2	0	312	12	0	324	-	-	-	
<b>Lights %</b>	94.7%	100%	100%	0%	97%	97%	100%	93.1%	100%	100%	93.6%	100%	100%	0%	0%	100%	0%	92.9%	100%	0%	93.1%	-	-	-	
<b>Single-Unit Trucks</b>	0	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	12	0	0	12	-	-	-	
<b>Single-Unit Trucks %</b>	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2.8%	0%	0%	0%	0%	0%	0%	3.6%	0%	0%	3.4%	-	-	-	
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
<b>Buses %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
<b>Articulated Trucks</b>	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	12	0	0	12	-	-	-	
<b>Articulated Trucks %</b>	0%	0%	0%	0%	0%	0%	0%	3.9%	0%	0%	3.6%	0%	0%	0%	0%	0%	0%	3.6%	0%	0%	3.4%	-	-	-	
<b>Bicycles on Road</b>	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	
<b>Bicycles on Road %</b>	5.3%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-	-	-	0	-	-	-	
<b>Pedestrians%</b>	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	40%	-	-	-	-	0%	-	-	-	-	
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-	-	-	-	
<b>Bicycles on Crosswalk%</b>	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	60%	-	-	-	-	0%	-	-	-	-	

Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)



Peak Hour: 03:30 PM - 04:30 PM Weather: Fair (27.22°C)





Turning Movement Count (1 . HWY 6 & PRESTON ST)

Start Time	N Approach PRESTON ST						E Approach HWY 6					S Approach PRESTON ST						W Approach HWY 6					Int. Total (15 min)	Int. Total (1 hr)			
	Right N:W	Thru N:S	Left N:E	U-Turn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	U-Turn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	U-Turn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	U-Turn W:W			Peds W:	Approach Total	
06:00:00	0	0	1	0	0	1	6	30	0	0	1	36	1	0	0	0	0	1	0	37	0	0	0	37	75		
06:15:00	0	0	1	0	2	1	10	31	1	0	3	42	4	1	0	0	1	5	1	47	0	0	0	48	96		
06:30:00	0	1	6	0	0	7	14	34	4	0	0	52	7	2	1	0	0	10	1	48	1	0	0	50	119		
06:45:00	0	0	2	0	0	2	22	53	10	0	0	85	3	0	0	0	0	3	1	47	0	0	0	48	138	428	
07:00:00	0	1	7	0	0	8	9	20	1	0	2	30	4	0	0	0	0	4	0	38	0	0	1	38	80	433	
07:15:00	0	1	5	0	0	6	14	37	4	0	0	55	5	3	2	0	0	10	0	50	0	0	0	50	121	458	
07:30:00	0	1	8	0	0	9	2	54	2	0	0	58	4	0	1	0	0	5	0	55	0	0	0	55	127	466	
07:45:00	0	1	2	0	0	3	5	47	5	0	0	57	6	2	0	0	1	8	0	41	0	0	0	41	109	437	
08:00:00	0	1	0	0	0	1	2	34	1	0	0	37	1	1	0	0	0	2	0	41	0	0	0	41	81	438	
08:15:00	0	0	2	0	0	2	0	50	4	0	0	54	5	0	0	0	1	5	0	65	0	0	0	65	126	443	
08:30:00	0	0	0	0	0	0	3	42	4	0	0	49	2	1	0	0	0	3	2	37	0	0	0	39	91	407	
08:45:00	1	1	2	0	0	4	2	46	2	0	0	50	2	1	0	0	1	3	0	60	0	0	0	60	117	415	
09:00:00	0	0	1	0	0	1	1	47	0	0	0	48	2	0	0	0	1	2	1	35	0	0	2	36	87	421	
09:15:00	0	1	1	0	0	2	1	50	1	0	0	52	3	0	1	0	0	4	1	38	0	0	0	39	97	392	
09:30:00	1	0	1	0	0	2	1	49	2	0	0	52	9	0	1	0	0	10	0	49	0	0	0	49	113	414	
09:45:00	0	3	2	0	0	5	2	52	1	0	0	55	8	1	0	0	0	9	0	58	0	0	0	58	127	424	
***BREAK***																											
15:00:00	0	2	17	0	0	19	6	55	4	0	1	65	4	3	0	0	0	7	1	62	0	0	0	63	154		
15:15:00	1	0	17	0	0	18	2	59	2	0	0	63	3	1	1	0	1	5	0	73	0	0	0	73	159		
15:30:00	1	2	14	0	0	17	2	59	6	0	0	67	4	0	1	0	0	5	3	90	0	0	0	93	182		
15:45:00	0	3	8	0	0	11	2	67	6	0	0	75	2	0	0	0	0	2	0	59	1	0	0	60	148	643	
16:00:00	0	0	12	0	0	12	1	87	5	0	0	93	8	0	0	0	0	8	1	60	0	0	0	61	174	663	
16:15:00	0	0	4	0	0	4	3	82	8	0	1	93	10	1	3	0	0	14	2	60	1	0	0	63	174	678	
16:30:00	0	0	3	0	0	3	2	77	3	0	0	82	7	1	4	0	0	12	0	74	1	0	0	75	172	668	
16:45:00	1	1	2	0	0	4	0	73	6	0	0	79	4	0	0	0	0	4	1	48	1	0	0	50	137	657	
17:00:00	1	0	1	0	0	2	2	92	4	0	0	98	2	0	2	0	0	4	0	64	0	0	0	64	168	651	
17:15:00	0	0	3	0	0	3	2	71	7	0	2	80	2	0	0	0	0	2	1	53	0	0	1	54	139	616	
17:30:00	0	1	4	0	0	5	3	52	3	0	0	58	7	0	0	0	0	7	2	54	1	0	0	57	127	571	
17:45:00	0	1	1	0	0	2	3	66	4	0	0	73	1	0	0	0	2	1	0	56	0	0	0	56	132	566	
18:00:00	0	1	3	0	0	4	2	71	6	0	0	79	2	1	1	0	0	4	0	46	0	0	0	46	133	531	
18:15:00	0	0	1	0	0	1	2	44	5	0	1	51	2	1	0	0	0	3	0	39	0	0	0	39	94	486	
18:30:00	0	0	3	0	0	3	1	38	4	0	0	43	1	0	1	0	3	2	1	41	0	0	0	42	90	449	
18:45:00	0	0	0	0	0	0	3	53	6	0	1	62	2	3	0	0	6	5	2	35	0	0	0	37	104	421	
<b>Grand Total</b>	<b>6</b>	<b>22</b>	<b>134</b>	<b>0</b>	<b>2</b>	<b>162</b>	<b>130</b>	<b>1722</b>	<b>121</b>	<b>0</b>	<b>12</b>	<b>1973</b>	<b>127</b>	<b>23</b>	<b>19</b>	<b>0</b>	<b>17</b>	<b>169</b>	<b>21</b>	<b>1660</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>1687</b>	<b>3991</b>	<b>-</b>	
<b>Approach%</b>	3.7%	13.6%	82.7%	0%	-	-	6.6%	87.3%	6.1%	0%	-	-	75.1%	13.6%	11.2%	0%	-	-	1.2%	98.4%	0.4%	0%	-	-	-	-	
<b>Totals %</b>	0.2%	0.6%	3.4%	0%	4.1%	-	3.3%	43.1%	3%	0%	49.4%	-	3.2%	0.6%	0.5%	0%	4.2%	0.5%	41.6%	0.2%	0%	-	42.3%	-	-	-	
<b>Heavy</b>	0	1	2	0	-	-	2	194	4	0	-	-	5	1	0	0	-	0	165	0	0	-	-	-	-	-	
<b>Heavy %</b>	0%	4.5%	1.5%	0%	-	-	1.5%	11.3%	3.3%	0%	-	-	3.9%	4.3%	0%	0%	-	0%	9.9%	0%	0%	-	-	-	-	-	
<b>Bicycles</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bicycle %</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)

Start Time	N Approach PRESTON ST						E Approach HWY 6						S Approach PRESTON ST						W Approach HWY 6						Int. Total (15 min)
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	
06:45:00	0	0	2	0	0	2	22	53	10	0	0	85	3	0	0	0	0	3	1	47	0	0	0	48	138
07:00:00	0	1	7	0	0	8	9	20	1	0	2	30	4	0	0	0	0	4	0	38	0	0	1	38	80
07:15:00	0	1	5	0	0	6	14	37	4	0	0	55	5	3	2	0	0	10	0	50	0	0	0	50	121
07:30:00	0	1	8	0	0	9	2	54	2	0	0	58	4	0	1	0	0	5	0	55	0	0	0	55	127
<b>Grand Total</b>	<b>0</b>	<b>3</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>47</b>	<b>164</b>	<b>17</b>	<b>0</b>	<b>2</b>	<b>228</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>190</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>191</b>	<b>466</b>
<b>Approach%</b>	0%	12%	88%	0%		-	20.6%	71.9%	7.5%	0%		-	72.7%	13.6%	13.6%	0%		-	0.5%	99.5%	0%	0%		-	-
<b>Totals %</b>	0%	0.6%	4.7%	0%		5.4%	10.1%	35.2%	3.6%	0%		48.9%	3.4%	0.6%	0.6%	0%		4.7%	0.2%	40.8%	0%	0%		41%	-
<b>PHF</b>	0	0.75	0.69	0		0.69	0.53	0.76	0.43	0		0.67	0.8	0.25	0.38	0		0.55	0.25	0.86	0	0		0.87	-
<b>Heavy</b>	0	0	0	0		0	0	26	1	0		27	1	0	0	0		1	0	25	0	0		25	-
<b>Heavy %</b>	0%	0%	0%	0%		0%	0%	15.9%	5.9%	0%		11.8%	6.3%	0%	0%	0%		4.5%	0%	13.2%	0%	0%		13.1%	-
<b>Lights</b>	0	3	22	0		25	46	137	16	0		199	15	3	3	0		21	1	165	0	0		166	-
<b>Lights %</b>	0%	100%	100%	0%		100%	97.9%	83.5%	94.1%	0%		87.3%	93.8%	100%	100%	0%		95.5%	100%	86.8%	0%	0%		86.9%	-
<b>Single-Unit Trucks</b>	0	0	0	0		0	0	12	1	0		13	0	0	0	0		0	0	20	0	0		20	-
<b>Single-Unit Trucks %</b>	0%	0%	0%	0%		0%	0%	7.3%	5.9%	0%		5.7%	0%	0%	0%	0%		0%	0%	10.5%	0%	0%		10.5%	-
<b>Buses</b>	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	-
<b>Buses %</b>	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
<b>Articulated Trucks</b>	0	0	0	0		0	0	14	0	0		14	1	0	0	0		1	0	5	0	0		5	-
<b>Articulated Trucks %</b>	0%	0%	0%	0%		0%	0%	8.5%	0%	0%		6.1%	6.3%	0%	0%	0%		4.5%	0%	2.6%	0%	0%		2.6%	-
<b>Bicycles on Road</b>	0	0	0	0		0	1	1	0	0		2	0	0	0	0		0	0	0	0	0		0	-
<b>Bicycles on Road %</b>	0%	0%	0%	0%		0%	2.1%	0.6%	0%	0%		0.9%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	-
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
<b>Pedestrians %</b>	-	-	-	-	0%	-	-	-	-	66.7%	-	-	-	-	0%	-	-	-	-	-	-	-	33.3%	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-
<b>Bicycles on Crosswalk %</b>	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	-	0%	-	-



Peak Hour: 03:30 PM - 04:30 PM Weather: Fair (27.22°C)

Start Time	N Approach PRESTON ST						E Approach HWY 6					S Approach PRESTON ST					W Approach HWY 6					Int. Total (15 min)			
	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left	U-Turn	Peds	Approach Total	Right	Thru	Left		U-Turn	Peds	Approach Total
15:30:00	1	2	14	0	0	17	2	59	6	0	0	67	4	0	1	0	0	5	3	90	0	0	0	93	182
15:45:00	0	3	8	0	0	11	2	67	6	0	0	75	2	0	0	0	0	2	0	59	1	0	0	60	148
16:00:00	0	0	12	0	0	12	1	87	5	0	0	93	8	0	0	0	0	8	1	60	0	0	0	61	174
16:15:00	0	0	4	0	0	4	3	82	8	0	1	93	10	1	3	0	0	14	2	60	1	0	0	63	174
<b>Grand Total</b>	<b>1</b>	<b>5</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>8</b>	<b>295</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>328</b>	<b>24</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>6</b>	<b>269</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>277</b>	<b>678</b>
<b>Approach%</b>	2.3%	11.4%	86.4%	0%	-	-	2.4%	89.9%	7.6%	0%	-	-	82.8%	3.4%	13.8%	0%	-	-	2.2%	97.1%	0.7%	0%	-	-	-
<b>Totals %</b>	0.1%	0.7%	5.6%	0%	6.5%	6.5%	1.2%	43.5%	3.7%	0%	48.4%	48.4%	3.5%	0.1%	0.6%	0%	4.3%	4.3%	0.8%	39.7%	0.3%	0%	40.9%	40.9%	-
<b>PHF</b>	0.25	0.42	0.68	0	0.65	0.65	0.67	0.85	0.78	0	0.88	0.88	0.6	0.25	0.33	0	0.52	0.52	0.5	0.75	0.5	0	0.74	0.74	-
<b>Heavy</b>	0	1	0	0	1	1	1	20	1	0	22	22	2	0	0	0	2	2	0	23	0	0	23	23	-
<b>Heavy %</b>	0%	20%	0%	0%	2.3%	2.3%	12.5%	6.8%	4%	0%	6.7%	6.7%	8.3%	0%	0%	0%	6.9%	6.9%	0%	8.6%	0%	0%	8.3%	8.3%	-
<b>Lights</b>	1	4	38	0	43	43	7	275	24	0	306	306	22	1	4	0	27	27	5	246	2	0	253	253	-
<b>Lights %</b>	100%	80%	100%	0%	97.7%	97.7%	87.5%	93.2%	96%	0%	93.3%	93.3%	91.7%	100%	100%	0%	93.1%	93.1%	83.3%	91.4%	100%	0%	91.3%	91.3%	-
<b>Single-Unit Trucks</b>	0	0	0	0	0	0	0	9	1	0	10	10	1	0	0	0	1	1	0	11	0	0	11	11	-
<b>Single-Unit Trucks %</b>	0%	0%	0%	0%	0%	0%	0%	3.1%	4%	0%	3%	3%	4.2%	0%	0%	0%	3.4%	3.4%	0%	4.1%	0%	0%	4%	4%	-
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Buses %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
<b>Articulated Trucks</b>	0	1	0	0	1	1	1	11	0	0	12	12	1	0	0	0	1	1	0	12	0	0	12	12	-
<b>Articulated Trucks %</b>	0%	20%	0%	0%	2.3%	2.3%	12.5%	3.7%	0%	0%	3.7%	3.7%	4.2%	0%	0%	0%	3.4%	3.4%	0%	4.5%	0%	0%	4.3%	4.3%	-
<b>Bicycles on Road</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	-
<b>Bicycles on Road %</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16.7%	0%	0%	0%	0%	0.4%	-
<b>Pedestrians</b>	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
<b>Pedestrians %</b>	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
<b>Bicycles on Crosswalk</b>	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
<b>Bicycles on Crosswalk %</b>	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-

Peak Hour: 06:45 AM - 07:45 AM Weather: Mostly Cloudy (22.22°C)



Peak Hour: 03:30 PM - 04:30 PM Weather: Fair (27.22°C)



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## **APPENDIX B**

### **Existing Area ITE Trip Generation**

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### Existing Residential

LUC	Dwellings	Peak Hours	Trip Equation	Total Trip Gen	Directional Distribution		Directional Site Trips		Total	Sec. No.
					IN	OUT	IN	OUT		
Single-Family Detached Housing (LUC 210)	18	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	16	26%	74%	4	12	16	1
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	20	63%	37%	13	7	20	
Single-Family Detached Housing (LUC 210)	19	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	16	26%	74%	4	12	16	2
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	21	63%	37%	13	8	21	
Single-Family Detached Housing (LUC 210)	20	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	17	26%	74%	4	13	17	3
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	22	63%	37%	14	8	22	
Single-Family Detached Housing (LUC 210)	22	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	19	26%	74%	5	14	19	4
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	24	63%	37%	15	9	24	
Single-Family Detached Housing (LUC 210)	16	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	14	26%	74%	4	10	14	5
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	18	63%	37%	11	7	18	
Single-Family Detached Housing (LUC 210)	15	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	13	26%	74%	3	10	13	6
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	17	63%	37%	11	6	17	
Single-Family Detached Housing (LUC 210)	33	AM	$\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$	27	26%	74%	7	20	27	7
		PM	$\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$	35	63%	37%	22	13	35	
<b>Total</b>							<b>130</b>	<b>149</b>	<b>279</b>	

### Existing Industrial (Domville Street west of Preston Street)

LUC	1000 Sq. Ft. GFA	Peak Hours	Trip Equation	Total Trip Gen	Directional Distribution		Directional Site Trips		Total
					IN	OUT	IN	OUT	
Manufacturing (LUC 140)	125	AM	$T = 0.61(X) + 9.54$	86	76%	24%	65	21	86
		PM	$T = 0.87(X) - 17.50$	91	31%	69%	28	63	91
Manufacturing (LUC 140)	210	AM	$T = 0.61(X) + 9.54$	138	76%	24%	105	33	138
		PM	$T = 0.87(X) - 17.50$	165	31%	69%	51	114	165

#### 321 Domville Trip Distribution

Direction	IN	OUT	Route
Eastbound	45%	45%	Smith Street
Westbound	45%	45%	Smith Street
Northbound	10%	10%	Preston Street

#### Corridor

Corridor	Number of Dwellings
Andrew St	18
Conestoga St N of Domville	19
McCord St	20
Domville between Preston and Andrew	22
Domville between Andrew and Conestoga	16
Domville between Conestoga and McCord	15
Domville between McCord and Tucker	33
<b>Total</b>	<b>143</b>

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## **APPENDIX C**

### **321 Domville Street TIS**

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The assessment of intersections is based on the “Highway Capacity Manual (HCM)” methodology. Intersections are assessed using a Level of Service (LOS) metric with ranges of delay assigned a letter from “A” to “F”; “A” representing low delays and “F” representing heavy delays. The LOS definitions for signalized and unsignalized intersections are included in **Appendix D**.

### 3.6 Intersection Operations

The operations of the study intersection were analyzed using the existing traffic volumes illustrated in **Figure 3. Table 2** summarizes the 2020 traffic levels of service on the boundary road network under existing conditions. Detailed capacity analyses are included in **Appendix E**.

**Table 2: 2020 Existing Traffic Level of Service**

Intersection	Control	Peak Hour	Level of Service <sup>1</sup>	Control Delay	Maximum v/c ratio <sup>2</sup>	95 <sup>th</sup> %ile Queues > Storage
Smith Street and Frederick Street	Signal	A.M.	A	7.0 s	0.35 (SBLTR)	None
		P.M.	A	8.0 s	0.42 (SBLTR)	None
Smith Street and Conestoga Street	Stop Minor Street)	A.M.	B	12.2s (SBLTR)	0.07 (SBLTR)	None
		P.M.	B	13.1s (SBLTR)	0.07 (SBLTR)	None
Smith Street and Preston Street	Stop (Minor Street)	A.M.	B	13.4s (SBLTR)	0.07 (SBLTR)	None
		P.M.	C	17.1s (SBLTR)	0.15 (SBLTR)	None

Note<sup>1</sup>: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

Note<sup>2</sup>: The maximum v/c ratio represents the maximum v/c ratio for the minor road approach movements at the intersection.

The study intersections are currently operating at LOS “B” or better during the weekday a.m. and p.m. peak hours, with the exception of Smith Street and Preston Street which operates at LOS “C” in the p.m. peak period with minor delays. This indicates that the intersections are currently operating at good levels of service with reserve capacity for future background growth.

## 4.0 Future Background Conditions

### 4.1 Horizon Years

The development is expected to be fully built-out within the five-year horizon. Accordingly, the five-year horizon (2025) and ten-year horizon (2030) were analyzed.

### 4.2 Growth Rate

The growth rate for the boundary road network was established using the Ministry of Transportation Ontario (MTO) historical Annual Average Daily Traffic (AADT) along Highway 6 west of the study area. A growth rate of 0.24% compounded annually was calculated from 2012-2016 AADT and 0.59% compounded annually was calculated from 2012-2016 SADT.

Therefore, to provide a conservative assessment, a one percent growth rate compounded annually was applied to all movements on the boundary road network. Growth rate calculations and AADT and SADT data are included in **Appendix F**.

Figures 4 and 5 outline the 2025 and 2030 future background traffic volumes, respectively.

### 4.3 Future Roadway Improvements

No capacity improvements have been identified for the boundary roads within the study horizons.

### 4.4 Intersection Operations

The 2025 and 2030 future background traffic volumes are illustrated in Figures 4 and 5, respectively. The 2025 and 2030 future background traffic levels of service are summarized in Table 3 and Table 4, respectively.

LOS definitions are included in Appendix D and detailed capacity analysis worksheets are included in Appendix E.

**Table 3: 2025 Future Background Level of Service**

Intersection	Control	Peak Hour	Level of Service <sup>1</sup>	Control Delay	Maximum v/c ratio <sup>2</sup>	95 <sup>th</sup> %ile Queues > Storage
Smith Street and Frederick Street	Signal	A.M.	A	7.1s	0.37 (SBLTR)	None
		P.M.	A	8.3s	0.43 (SBLTR)	None
Smith Street and Conestoga Street	Stop Minor Street)	A.M.	B	12.6s (SBLTR)	0.08 (SBLTR)	None
		P.M.	B	13.6s (SBLTR)	0.08 (SBLTR)	None
Smith Street and Preston Street	Stop (Minor Street)	A.M.	B	13.8s (SBLTR)	0.07 (SBLTR)	None
		P.M.	C	18.0s (SBLTR)	0.15 (SBLTR)	None

Note<sup>1</sup>: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

Note<sup>2</sup>: The maximum v/c ratio represents the maximum v/c ratio for the minor road approach movements at the intersection.

**Table 4: 2030 Future Background Level of Service**

Intersection	Control	Peak Hour	Level of Service <sup>1</sup>	Control Delay	Maximum v/c ratio <sup>2</sup>	95 <sup>th</sup> %ile Queues > Storage
Smith Street and Frederick Street	Signal	A.M.	A	7.3s	0.38 (SBLTR)	None
		P.M.	A	8.5s	0.46 (SBLTR)	None
Smith Street and Conestoga Street	Stop Minor Street)	A.M.	B	12.9s (SBLTR)	0.09 (SBLTR)	None
		P.M.	B	14.0s (SBLTR)	0.08 (SBLTR)	None
Smith Street and Preston Street	Stop (Minor Street)	A.M.	B	14.3s (SBLTR)	0.08 (SBLTR)	None
		P.M.	C	19.2s (SBLTR)	0.17 (SBLTR)	None

Note<sup>1</sup>: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

Note<sup>2</sup>: The maximum v/c ratio represents the maximum v/c ratio for the minor road approach movements at the intersection.

The study intersections are expected to operate at a LOS “B” or better under future background conditions with the exception of Smith Street and Preston Street which is expected to operate at LOS “C” during the weekday p.m. peak hour. This intersection is anticipated to experience a maximum delay of 19.2 seconds (p.m.) and volume-to-capacity ratio of 0.21 (WBTR – p.m.). No movements are expected to operate with 95<sup>th</sup> percentile queue lengths exceeding the available storage lengths. These metrics indicate that the intersections are anticipated to continue operating well, with reserve capacity for increased traffic volumes.

## 5.0 Site Generated Traffic

### 5.1 Trip Generation

The proposed development will result in additional vehicles on the boundary road network that previously did not exist. The proposed development will also result in additional turning movements at the boundary road intersections.

The trip generation for the residential development was forecasted based the Draft Plan that proposes 141 single family detached units and 99 townhouse units.

The trips generated by the proposed development were forecasted using the information provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. Specifically, Land Use Category 220: Multifamily Housing (Low-Rise) and Land Use Category 210: Single Family Detached Housing were applied to the proposed development to forecast the trip generation of the townhouses and detached units, respectively. The trip generation for each land use is summarized in **Table 5** below. Relevant excerpts from the ITE Trip Generation Manual, 10<sup>th</sup> Edition have been included as **Appendix G**.

**Table 5: Development Trip Generation**

Block	Roadway Peak Hour	Weekday Trips		
		Inbound	Outbound	Total
L.U. 220: Multifamily Housing (Low-Rise) (99 Units)	Weekday A.M.	11	36	47
	Weekday P.M.	34	21	55
L.U. 210: Single Family Detached Housing (141 Units)	Weekday A.M.	26	78	104
	Weekday P.M.	89	52	142
<b>Total</b>	<b>Weekday A.M.</b>	<b>37</b>	<b>114</b>	<b>151</b>
	<b>Weekday P.M.</b>	<b>123</b>	<b>73</b>	<b>196</b>

The proposed development is expected to generate approximately 151 and 196 total two-way trips during the weekday a.m. and p.m. peak hours, respectively.

## 5.2 Trip Distribution and Assignment

The trips generated by the proposed development were distributed to the boundary road network based on observed travel patterns on Smith Street. A near-even split in eastbound and westbound traffic volumes was observed. Accordingly, 45% of trips generated by the proposed development were assumed to arrive and depart to the east via Smith Street, 45% to the west via Smith Street and 10% to the north via Preston Street. The trip distribution is illustrated in **Figure 6** and trip assignment is illustrated in **Figure 7**.

## 6.0 Future Total Conditions

### 6.1 Basis of Assessment

The traffic impacts arising from the proposed development were assessed based on the site generated traffic illustrated in **Figures 6 and 7** being superimposed on the future background traffic volumes in **Figure 4 and 5**. The resulting total traffic volumes for the weekday a.m. and p.m. peak hours are illustrated in **Figures 8 and 9** for the 2025 and 2030 horizon years, respectively.

### 6.2 Site Access

The development proposes three accesses to Preston Street. These accesses will be stop controlled with Preston Street operating uninterrupted. The site accesses were modelled in Synchro accordingly.

### 6.3 Intersection Operations

**Table 6 and Table 7** outline the 2025 and 2030 future total traffic levels of service, respectively, based on the traffic volumes illustrated in **Figures 8 and 9**. The level of service definitions are included in **Appendix D**, with detailed capacity analysis worksheets included in **Appendix E**.

**Table 6: 2025 Future Total Level of Service**

Intersection	Control	Peak Hour	Level of Service <sup>1</sup>	Control Delay	Maximum v/c ratio <sup>2</sup>	95 <sup>th</sup> %ile Queues > Storage
Smith Street and Frederick Street	Signal	A.M.	A	7.2s	0.37 (SBLTR)	None
		P.M.	A	8.5s	0.43 (WBLTR)	None
Smith Street and Conestoga Street	Stop Minor Street)	A.M.	B	13.4s (SBLTR)	0.09 (SBLTR)	None
		P.M.	B	14.7s (SBLTR)	0.09 (SBLTR)	None
Smith Street and Preston Street	Stop (Minor Street)	A.M.	C	15.4s (SBLTR)	0.31 (SBLTR)	None
		P.M.	C	24.1s (SBLTR)	0.39 (SBLTR)	None
Smith Street and Street A	Stop Minor Street)	A.M.	A	9.2s (WBLR)	0.07 (WBLR)	None
		P.M.	A	9.2s (WBLR)	0.04 (WBLR)	None
Smith Street and Street C	Stop (Minor Street)	A.M.	A	9.4s (WBLR)	0.01 (WBLR)	None
		P.M.	A	9.3s (WBLR)	0.01 (WBLR)	None
Smith Street and Street D	Stop Minor Street)	A.M.	A	9.7s (WBLR)	0.06 (WBLR)	None
		P.M.	A	9.7s (WBLR)	0.04 (WBLR)	None

Note<sup>1</sup>: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

Note<sup>2</sup>: The maximum v/c ratio represents the maximum v/c ratio for the minor road approach movements at the intersection.

**Table 7: 2030 Future Total Level of Service**

Intersection	Control	Peak Hour	Level of Service <sup>1</sup>	Control Delay	Maximum v/c ratio <sup>2</sup>	95 <sup>th</sup> %ile Queues > Storage
Smith Street and Frederick Street	Signal	A.M.	A	7.4s	0.38 (SBLTR)	None
		P.M.	A	8.7s	0.46 (WBLTR)	None
Smith Street and Conestoga Street	Stop Minor Street)	A.M.	B	13.7s (SBLTR)	0.10 (SBLTR)	None
		P.M.	C	15.2s (SBLTR)	0.09 (SBLTR)	None
Smith Street and Preston Street	Stop (Minor Street)	A.M.	C	16.0s (SBLTR)	0.32 (SBLTR)	None
		P.M.	D	26.8s (SBLTR)	0.43 (SBLTR)	None
Smith Street and Street A	Stop Minor Street)	A.M.	A	9.2s (WBLR)	0.07 (WBLR)	None
		P.M.	A	9.2s (WBLR)	0.04 (WBLR)	None
Smith Street and Street C	Stop Minor Street)	A.M.	A	9.4s (WBLR)	0.01 (WBLR)	None
		P.M.	A	9.5s (WBLR)	0.01 (WBLR)	None
Smith Street and Street D	Stop (Minor Street)	A.M.	A	9.7s (WBLR)	0.06 (WBLR)	None
		P.M.	A	9.8s (WBLR)	0.04 (WBLR)	None

Note<sup>1</sup>: The Level of Service of a signalized intersection is based on the average control delay per vehicle.

Note<sup>2</sup>: The maximum v/c ratio represents the maximum v/c ratio for the minor road approach movements at the intersection.

The intersection of Smith Street and Frederick Street is expected to continue operating at a LOS “A” in the weekday a.m. and p.m. peak hours, respectively. While the intersection of Smith Street and Conestoga Street is expected to change from a LOS “B” to “C” between future background and future total conditions in the p.m. peak hour, the increase in delay is only 1.2 seconds under 2030 future total conditions the intersection of Smith Street and Preston Street is expected to change from LOS “B” to “C” during the a.m. peak hour and LOS “C” to LOS “D” during the p.m. peak hour.

The three site access intersections are expected to operate at LOS “A” under future total conditions.

These operations indicate that the study intersections are expected to continue operating at acceptable levels of service. The addition of site generated traffic to the boundary road network is expected to minimally impact the traffic operations at the study intersections.

## 7.0 Preston Street Roadway Conditions

Preston Street is currently an unpaved roadway with no pedestrian facilities, thus resulting in a gap in pedestrian connectivity between Smith Street and Domville Street. It is also acknowledged that the Draft Plan proposes a total of 240 residential units which will generate additional vehicular and pedestrian traffic to and from the development and the boundary road network.

Therefore, it is recommended that the unpaved section of Preston Street be resurfaced with asphalt pavement to improve roadway surface conditions for vehicular traffic. It is also recommended that a pedestrian sidewalk be constructed on the east side of Preston Street to provide safe and convenient

pedestrian connectivity to and from the proposed development and complete the gap in pedestrian connectivity between Smith Street and Domville Street.

The exact cross-section of the roadway can be established with the Township during the detailed design stage of the project.

## 8.0 Conclusions

The detailed analysis contained within this report has resulted in the following key findings:

- Analysis of 2020 existing traffic operations at the study indicates that the study intersections are currently operating at LOS "C" or better during the weekday a.m. and p.m. peak hour with reserve capacity for future background growth.
- Analysis of 2030 future background operations indicate that the study intersections are expected to operate at LOS "C" or better.
- The proposed residential development is forecasted to generate a total of 151 and 196 trips during the weekday a.m. and p.m. peak periods, respectively.
- Under 2030 future total conditions, the intersection of Smith Street and Frederick Street is expected to continue operating at a LOS "A" in the weekday a.m. and p.m. peak hours, respectively. While the intersection of Smith Street and Conestoga Street is expected to change from a LOS "B" to "C" between future background and future total conditions in the p.m. peak hour, the increase in delay is only 1.2 seconds under 2030 future total conditions the intersection of Smith Street and Preston Street is expected to change from LOS "B" to "C" during the a.m. peak hour and LOS "C" to LOS "D" during the p.m. peak hour.
- Preston Street is currently an unpaved roadway with no pedestrian facilities, thus resulting in a gap in pedestrian connectivity between Smith Street and Domville Street.
- It is recommended that the unpaved section of Preston Street be resurfaced with asphalt pavement to improve roadway surface conditions for vehicular traffic, and that a pedestrian sidewalk be constructed on the east side of Preston Street to provide safe and convenient pedestrian connectivity to and from the proposed development and complete the gap in pedestrian connectivity between Smith Street and Domville Street.
- The exact cross-section of the roadway can be established with the Township during the detailed design stage of the project.
- It is concluded that the traffic generated by the proposed development can be accommodated by the boundary road network.

The results and conclusions contained within this are based on the current version of the Draft Plan, as prepared by Glen Schnarr & Associates Inc. (dated July 27, 2020). Any minor changes to the Plan will not materially affect the conclusions contained within this report.

In conclusion, the Draft Plan of Subdivision Application can be supported from a transportation perspective with the implementation of the noted recommendations.

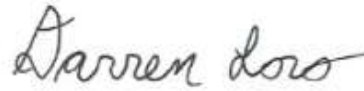
Respectfully submitted by,

**C.F. CROZIER & ASSOCIATES INC.**



Alexander J. W. Fleming, MBA, P.Eng.  
Associate

**C.F. CROZIER & ASSOCIATES INC.**



Darren J. Loro, C.E.T.  
Transportation Technologist

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J:\1400\1484-Cachet Developments\5610\_321 Domville St\Reports\5610\_TIS (August 2020)

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## **APPENDIX D**

### **Concept Plan**

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## **APPENDIX E**

















### **HCM Output Reports**

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Adelaide Street TIS  
1: Conestoga St N & Domville St

Baseline (2022) Traffic Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	4	7	16	2	2	2	3	6	5	1
Future Volume (Veh/h)	0	17	4	7	16	2	2	2	3	6	5	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	18	4	8	17	2	2	2	3	7	5	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	19			22			58	55	20	58	56	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	19			22			58	55	20	58	56	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	99	99	100
cM capacity (veh/h)	1597			1593			930	832	1058	931	831	1061
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	27	7	13								
Volume Left	0	8	2	7								
Volume Right	4	2	3	1								
cSH	1597	1593	947	898								
Volume to Capacity	0.00	0.01	0.01	0.01								
Queue Length 95th (m)	0.0	0.1	0.2	0.4								
Control Delay (s)	0.0	2.2	8.8	9.1								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	2.2	8.8	9.1								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			17.2%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Baseline (2022) Traffic Conditions  
AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	1	6	9	5	11
Future Volume (Veh/h)	9	1	6	9	5	11
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	1	7	10	5	12
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	34	12			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	12			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	976	1069			1600	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	11	17	17			
Volume Left	10	0	5			
Volume Right	1	10	0			
cSH	984	1700	1600			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (m)	0.3	0.0	0.1			
Control Delay (s)	8.7	0.0	2.2			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	2.2			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.9			
Intersection Capacity Utilization			15.0%	ICU Level of Service	A	
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Baseline (2022) Traffic Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	246	0	0	232	6	0	1	1	14	0	19
Future Volume (Veh/h)	13	246	0	0	232	6	0	1	1	14	0	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	267	0	0	252	7	0	1	1	15	0	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	259			267			572	554	267	552	550	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259			267			572	554	267	552	550	256
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	97	100	97
cM capacity (veh/h)	1306			1297			416	436	772	439	438	783
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	281	259	2	36								
Volume Left	14	0	0	15								
Volume Right	0	7	1	21								
cSH	1306	1297	557	591								
Volume to Capacity	0.01	0.00	0.00	0.06								
Queue Length 95th (m)	0.3	0.0	0.1	1.6								
Control Delay (s)	0.5	0.0	11.5	11.5								
Lane LOS	A		B	B								
Approach Delay (s)	0.5	0.0	11.5	11.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			38.8%		ICU Level of Service				A			
Analysis Period (min)			15									










Adelaide Street TIS  
1: Conestoga St N & Domville St

Baseline (2022) Traffic Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	20	2	4	22	7	5	6	7	4	4	0
Future Volume (Veh/h)	0	20	2	4	22	7	5	6	7	4	4	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	22	2	4	24	8	5	7	8	4	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	32			24			61	63	23	70	60	28
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	32			24			61	63	23	70	60	28
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	99	100	100	100
cM capacity (veh/h)	1580			1591			929	826	1054	906	829	1047
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	24	36	20	8								
Volume Left	0	4	5	4								
Volume Right	2	8	8	0								
cSH	1580	1591	932	866								
Volume to Capacity	0.00	0.00	0.02	0.01								
Queue Length 95th (m)	0.0	0.1	0.5	0.2								
Control Delay (s)	0.0	0.8	8.9	9.2								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.8	8.9	9.2								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			15.1%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Baseline (2022) Traffic Conditions  
PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	3	15	14	1	9
Future Volume (Veh/h)	12	3	15	14	1	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	3	16	15	1	10
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	36	24			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	24			31	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	977	1053			1582	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	16	31	11			
Volume Left	13	0	1			
Volume Right	3	15	0			
cSH	990	1700	1582			
Volume to Capacity	0.02	0.02	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	8.7	0.0	0.7			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	0.7			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.5			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Baseline (2022) Traffic Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	336	0	2	333	25	0	1	1	11	3	19
Future Volume (Veh/h)	12	336	0	2	333	25	0	1	1	11	3	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	365	0	2	362	27	0	1	1	12	3	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	389			365			793	784	365	772	770	376
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	389			365			793	784	365	772	770	376
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	96	99	97
cM capacity (veh/h)	1170			1194			292	321	680	312	327	671
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	378	391	2	36								
Volume Left	13	2	0	12								
Volume Right	0	27	1	21								
cSH	1170	1194	436	456								
Volume to Capacity	0.01	0.00	0.00	0.08								
Queue Length 95th (m)	0.3	0.0	0.1	2.0								
Control Delay (s)	0.4	0.1	13.3	13.6								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.4	0.1	13.3	13.6								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			41.3%	ICU Level of Service		A						
Analysis Period (min)			15									

Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2023) Background Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	4	7	16	2	2	2	3	6	5	1
Future Volume (Veh/h)	0	17	4	7	16	2	2	2	3	6	5	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	18	4	8	17	2	2	2	3	7	5	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	19			22			58	55	20	58	56	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	19			22			58	55	20	58	56	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	99	99	100
cM capacity (veh/h)	1597			1593			930	832	1058	931	831	1061
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	27	7	13								
Volume Left	0	8	2	7								
Volume Right	4	2	3	1								
cSH	1597	1593	947	898								
Volume to Capacity	0.00	0.01	0.01	0.01								
Queue Length 95th (m)	0.0	0.1	0.2	0.4								
Control Delay (s)	0.0	2.2	8.8	9.1								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	2.2	8.8	9.1								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			17.2%		ICU Level of Service				A			
Analysis Period (min)			15									

Adelaide Street TIS  
2: Conestoga St N & Adelaide St

















Future (2023) Background Conditions  
AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	1	6	9	5	11
Future Volume (Veh/h)	9	1	6	9	5	11
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	1	7	10	5	12
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	34	12			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	12			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	976	1069			1600	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	11	17	17			
Volume Left	10	0	5			
Volume Right	1	10	0			
cSH	984	1700	1600			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (m)	0.3	0.0	0.1			
Control Delay (s)	8.7	0.0	2.2			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	2.2			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.9			
Intersection Capacity Utilization			15.0%		ICU Level of Service	A
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2023) Background Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	248	0	0	234	6	0	1	1	14	0	19
Future Volume (Veh/h)	13	248	0	0	234	6	0	1	1	14	0	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	270	0	0	254	7	0	1	1	15	0	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	261			270			576	559	270	557	556	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	261			270			576	559	270	557	556	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	97	100	97
cM capacity (veh/h)	1303			1293			413	433	769	436	435	781
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	284	261	2	36								
Volume Left	14	0	0	15								
Volume Right	0	7	1	21								
cSH	1303	1293	554	587								
Volume to Capacity	0.01	0.00	0.00	0.06								
Queue Length 95th (m)	0.3	0.0	0.1	1.6								
Control Delay (s)	0.5	0.0	11.5	11.5								
Lane LOS	A		B	B								
Approach Delay (s)	0.5	0.0	11.5	11.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			38.9%		ICU Level of Service				A			
Analysis Period (min)			15									










Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2023) Background Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	20	4	4	22	7	5	6	7	4	4	0
Future Volume (Veh/h)	0	20	4	4	22	7	5	6	7	4	4	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	22	4	4	24	8	5	7	8	4	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	32			26			62	64	24	72	62	28
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	32			26			62	64	24	72	62	28
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	99	100	100	100
cM capacity (veh/h)	1580			1588			928	825	1052	905	827	1047
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	26	36	20	8								
Volume Left	0	4	5	4								
Volume Right	4	8	8	0								
cSH	1580	1588	931	864								
Volume to Capacity	0.00	0.00	0.02	0.01								
Queue Length 95th (m)	0.0	0.1	0.5	0.2								
Control Delay (s)	0.0	0.8	9.0	9.2								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.8	9.0	9.2								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			15.1%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2023) Background Conditions  
PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	3	15	14	1	9
Future Volume (Veh/h)	12	3	15	14	1	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	3	16	15	1	10
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	36	24			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	24			31	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	977	1053			1582	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	16	31	11			
Volume Left	13	0	1			
Volume Right	3	15	0			
cSH	990	1700	1582			
Volume to Capacity	0.02	0.02	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	8.7	0.0	0.7			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	0.7			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.5			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2023) Background Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	339	0	2	336	25	0	1	1	11	3	19
Future Volume (Veh/h)	12	339	0	2	336	25	0	1	1	11	3	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	368	0	2	365	27	0	1	1	12	3	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	392			368			799	790	368	778	776	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	392			368			799	790	368	778	776	378
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	96	99	97
cM capacity (veh/h)	1167			1191			289	318	677	309	324	668
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	381	394	2	36								
Volume Left	13	2	0	12								
Volume Right	0	27	1	21								
cSH	1167	1191	433	453								
Volume to Capacity	0.01	0.00	0.00	0.08								
Queue Length 95th (m)	0.3	0.0	0.1	2.1								
Control Delay (s)	0.4	0.1	13.4	13.6								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.4	0.1	13.4	13.6								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			41.5%		ICU Level of Service				A			
Analysis Period (min)			15									

Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2028) Background Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	24	4	7	19	2	2	2	3	6	5	1
Future Volume (Veh/h)	0	24	4	7	19	2	2	2	3	6	5	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	4	8	21	2	2	2	3	7	5	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	23			30			70	67	28	70	68	22
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			30			70	67	28	70	68	22
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	99	99	100
cM capacity (veh/h)	1592			1583			914	819	1047	914	818	1055
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	30	31	7	13								
Volume Left	0	8	2	7								
Volume Right	4	2	3	1								
cSH	1592	1583	934	883								
Volume to Capacity	0.00	0.01	0.01	0.01								
Queue Length 95th (m)	0.0	0.1	0.2	0.4								
Control Delay (s)	0.0	1.9	8.9	9.1								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	1.9	8.9	9.1								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.0									
Intersection Capacity Utilization			17.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Adelaide Street TIS  
2: Conestoga St N & Adelaide St

















Future (2028) Background Conditions  
AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	1	6	9	5	11
Future Volume (Veh/h)	9	1	6	9	5	11
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	1	7	10	5	12
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	34	12			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	12			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	976	1069			1600	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	11	17	17			
Volume Left	10	0	5			
Volume Right	1	10	0			
cSH	984	1700	1600			
Volume to Capacity	0.01	0.01	0.00			
Queue Length 95th (m)	0.3	0.0	0.1			
Control Delay (s)	8.7	0.0	2.2			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	2.2			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.9			
Intersection Capacity Utilization			15.0%	ICU Level of Service	A	
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2028) Background Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	312	0	0	263	6	0	1	1	14	0	19
Future Volume (Veh/h)	13	312	0	0	263	6	0	1	1	14	0	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	339	0	0	286	7	0	1	1	15	0	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	293			339			678	660	339	658	656	290
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	293			339			678	660	339	658	656	290
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	96	100	97
cM capacity (veh/h)	1269			1220			353	379	703	373	381	750
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	353	293	2	36								
Volume Left	14	0	0	15								
Volume Right	0	7	1	21								
cSH	1269	1220	492	528								
Volume to Capacity	0.01	0.00	0.00	0.07								
Queue Length 95th (m)	0.3	0.0	0.1	1.8								
Control Delay (s)	0.4	0.0	12.3	12.3								
Lane LOS	A		B	B								
Approach Delay (s)	0.4	0.0	12.3	12.3								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			42.2%		ICU Level of Service				A			
Analysis Period (min)			15									










Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2028) Background Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	25	2	4	29	7	5	6	7	4	4	0
Future Volume (Veh/h)	0	25	2	4	29	7	5	6	7	4	4	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	2	4	32	8	5	7	8	4	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	40			29			74	76	28	84	73	36
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	40			29			74	76	28	84	73	36
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	99	100	100	100
cM capacity (veh/h)	1570			1584			911	812	1047	889	815	1037
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	29	44	20	8								
Volume Left	0	4	5	4								
Volume Right	2	8	8	0								
cSH	1570	1584	920	851								
Volume to Capacity	0.00	0.00	0.02	0.01								
Queue Length 95th (m)	0.0	0.1	0.5	0.2								
Control Delay (s)	0.0	0.7	9.0	9.3								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.7	9.0	9.3								
Approach LOS			A	A								
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			15.4%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2028) Background Conditions  
PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	3	15	14	1	9
Future Volume (Veh/h)	12	3	15	14	1	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	3	16	15	1	10
<b>Pedestrians</b>						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	36	24			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	24			31	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	977	1053			1582	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	16	31	11			
Volume Left	13	0	1			
Volume Right	3	15	0			
cSH	990	1700	1582			
Volume to Capacity	0.02	0.02	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	8.7	0.0	0.7			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	0.7			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.5			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2028) Background Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	389	0	0	408	25	0	1	1	11	3	19
Future Volume (Veh/h)	12	389	0	0	408	25	0	1	1	11	3	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	423	0	0	443	27	0	1	1	12	3	21
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	470			423			928	919	423	907	906	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	470			423			928	919	423	907	906	456
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	95	99	97
cM capacity (veh/h)	1092			1136			236	268	631	253	273	604
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	436	470	2	36								
Volume Left	13	0	0	12								
Volume Right	0	27	1	21								
cSH	1092	1136	376	386								
Volume to Capacity	0.01	0.00	0.01	0.09								
Queue Length 95th (m)	0.3	0.0	0.1	2.4								
Control Delay (s)	0.4	0.0	14.6	15.3								
Lane LOS	A		B	C								
Approach Delay (s)	0.4	0.0	14.6	15.3								
Approach LOS			B	C								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			45.4%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2023) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	4	7	16	2	2	2	4	6	5	1
Future Volume (Veh/h)	0	17	4	7	16	2	2	2	4	6	5	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	18	4	8	17	2	2	2	4	7	5	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	19			22			58	55	20	59	56	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	19			22			58	55	20	59	56	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	99	99	100
cM capacity (veh/h)	1597			1593			930	832	1058	928	831	1061
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	27	8	13								
Volume Left	0	8	2	7								
Volume Right	4	2	4	1								
cSH	1597	1593	960	896								
Volume to Capacity	0.00	0.01	0.01	0.01								
Queue Length 95th (m)	0.0	0.1	0.2	0.4								
Control Delay (s)	0.0	2.2	8.8	9.1								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	2.2	8.8	9.1								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			17.2%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2023) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	8	9	0	1	4	6	9	5	11	0
Future Volume (Veh/h)	1	0	8	9	0	1	4	6	9	5	11	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	9	10	0	1	4	7	10	5	12	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	43	47	12	51	42	12	12			17		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43	47	12	51	42	12	12			17		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	100			100		
cM capacity (veh/h)	955	840	1069	936	845	1069	1607			1600		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	10	11	21	17								
Volume Left	1	10	4	5								
Volume Right	9	1	10	0								
cSH	1056	947	1607	1600								
Volume to Capacity	0.01	0.01	0.00	0.00								
Queue Length 95th (m)	0.2	0.3	0.1	0.1								
Control Delay (s)	8.4	8.8	1.4	2.2								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.4	8.8	1.4	2.2								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.2									
Intersection Capacity Utilization			13.3%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2023) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	248	0	0	234	8	0	1	1	18	0	23
Future Volume (Veh/h)	15	248	0	0	234	8	0	1	1	18	0	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	270	0	0	254	9	0	1	1	20	0	25
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	263			270			586	565	270	562	560	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	263			270			586	565	270	562	560	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	95	100	97
cM capacity (veh/h)	1301			1293			405	429	769	432	431	780
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	286	263	2	45								
Volume Left	16	0	0	20								
Volume Right	0	9	1	25								
cSH	1301	1293	551	575								
Volume to Capacity	0.01	0.00	0.00	0.08								
Queue Length 95th (m)	0.3	0.0	0.1	2.0								
Control Delay (s)	0.5	0.0	11.6	11.8								
Lane LOS	A		B	B								
Approach Delay (s)	0.5	0.0	11.6	11.8								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			41.1%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2023) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	20	2	5	22	7	5	6	8	4	4	0
Future Volume (Veh/h)	0	20	2	5	22	7	5	6	8	4	4	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	22	2	5	24	8	5	7	9	4	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	32			24			63	65	23	74	62	28
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	32			24			63	65	23	74	62	28
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	99	100	100	100
cM capacity (veh/h)	1580			1591			926	823	1054	901	826	1047
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	24	37	21	8								
Volume Left	0	5	5	4								
Volume Right	2	8	9	0								
cSH	1580	1591	936	862								
Volume to Capacity	0.00	0.00	0.02	0.01								
Queue Length 95th (m)	0.0	0.1	0.6	0.2								
Control Delay (s)	0.0	1.0	8.9	9.2								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	1.0	8.9	9.2								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.3									
Intersection Capacity Utilization			16.0%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2023) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	6	12	0	3	9	15	14	1	9	1
Future Volume (Veh/h)	1	0	6	12	0	3	9	15	14	1	9	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	7	13	0	3	10	16	15	1	10	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	59	64	10	63	56	24	11			31		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	59	64	10	63	56	24	11			31		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	99			100		
cM capacity (veh/h)	930	822	1071	921	829	1053	1608			1582		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	8	16	41	12								
Volume Left	1	13	10	1								
Volume Right	7	3	15	1								
cSH	1051	943	1608	1582								
Volume to Capacity	0.01	0.02	0.01	0.00								
Queue Length 95th (m)	0.2	0.4	0.2	0.0								
Control Delay (s)	8.5	8.9	1.8	0.6								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.5	8.9	1.8	0.6								
Approach LOS	A	A										
Intersection Summary												
Average Delay			3.8									
Intersection Capacity Utilization			14.2%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2023) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	339	0	2	336	30	0	1	1	14	3	22
Future Volume (Veh/h)	16	339	0	2	336	30	0	1	1	14	3	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	368	0	2	365	33	0	1	1	15	3	24
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	398			368			813	804	368	789	788	382
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	398			368			813	804	368	789	788	382
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	95	99	96
cM capacity (veh/h)	1161			1191			281	311	677	303	318	666
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	385	400	2	42								
Volume Left	17	2	0	15								
Volume Right	0	33	1	24								
cSH	1161	1191	427	442								
Volume to Capacity	0.01	0.00	0.00	0.09								
Queue Length 95th (m)	0.4	0.0	0.1	2.5								
Control Delay (s)	0.5	0.1	13.5	14.0								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.5	0.1	13.5	14.0								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			44.7%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2028) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	22	4	9	17	2	2	2	6	6	5	1
Future Volume (Veh/h)	0	22	4	9	17	2	2	2	6	6	5	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	24	4	10	18	2	2	2	7	7	5	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	20			28			68	66	26	73	67	19
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			28			68	66	26	73	67	19
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	99	99	100
cM capacity (veh/h)	1596			1585			914	819	1050	906	818	1059
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	28	30	11	13								
Volume Left	0	10	2	7								
Volume Right	4	2	7	1								
cSH	1596	1585	974	879								
Volume to Capacity	0.00	0.01	0.01	0.01								
Queue Length 95th (m)	0.0	0.2	0.3	0.4								
Control Delay (s)	0.0	2.5	8.7	9.2								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	2.5	8.7	9.2								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.5									
Intersection Capacity Utilization			18.2%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2028) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	26	9	0	1	10	6	9	5	11	2
Future Volume (Veh/h)	3	0	26	9	0	1	10	6	9	5	11	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	28	10	0	1	11	7	10	5	12	2
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	58	62	13	85	58	12	14			17		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	58	62	13	85	58	12	14			17		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	97	99	100	100	99			100		
cM capacity (veh/h)	931	821	1067	871	825	1069	1604			1600		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	31	11	28	19								
Volume Left	3	10	11	5								
Volume Right	28	1	10	2								
cSH	1052	886	1604	1600								
Volume to Capacity	0.03	0.01	0.01	0.00								
Queue Length 95th (m)	0.7	0.3	0.2	0.1								
Control Delay (s)	8.5	9.1	2.9	1.9								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.5	9.1	2.9	1.9								
Approach LOS	A	A										
Intersection Summary												
Average Delay			5.4									
Intersection Capacity Utilization			13.3%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2028) Total Conditions  
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	294	0	0	257	14	0	1	1	36	0	23
Future Volume (Veh/h)	15	294	0	0	257	14	0	1	1	36	0	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	320	0	0	279	15	0	1	1	39	0	25
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	294			320			664	646	320	640	638	286
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	294			320			664	646	320	640	638	286
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	90	100	97
cM capacity (veh/h)	1268			1240			358	385	721	383	389	753
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	336	294	2	64								
Volume Left	16	0	0	39								
Volume Right	0	15	1	25								
cSH	1268	1240	502	474								
Volume to Capacity	0.01	0.00	0.00	0.14								
Queue Length 95th (m)	0.3	0.0	0.1	3.7								
Control Delay (s)	0.5	0.0	12.2	13.8								
Lane LOS	A		B	B								
Approach Delay (s)	0.5	0.0	12.2	13.8								
Approach LOS			B	B								
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			44.4%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
1: Conestoga St N & Domville St

Future (2028) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	24	2	6	28	7	5	6	9	4	4	0
Future Volume (Veh/h)	0	24	2	6	28	7	5	6	9	4	4	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	2	7	30	8	5	7	10	4	4	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	38			28			77	79	27	88	76	34
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	38			28			77	79	27	88	76	34
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	99	100	100	100
cM capacity (veh/h)	1572			1585			906	808	1048	879	811	1039
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	28	45	22	8								
Volume Left	0	7	5	4								
Volume Right	2	8	10	0								
cSH	1572	1585	927	844								
Volume to Capacity	0.00	0.00	0.02	0.01								
Queue Length 95th (m)	0.0	0.1	0.6	0.2								
Control Delay (s)	0.0	1.2	9.0	9.3								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	1.2	9.0	9.3								
Approach LOS			A	A								
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			17.1%		ICU Level of Service				A			
Analysis Period (min)			15									

















Adelaide Street TIS  
2: Conestoga St N & Adelaide St

Future (2028) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	18	12	0	3	28	15	14	1	9	2
Future Volume (Veh/h)	2	0	18	12	0	3	28	15	14	1	9	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	20	13	0	3	30	16	15	1	10	2
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	100	104	11	116	98	24	12			31		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100	104	11	116	98	24	12			31		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	98	98	100	100	98			100		
cM capacity (veh/h)	867	771	1070	831	777	1053	1607			1582		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	16	61	13								
Volume Left	2	13	30	1								
Volume Right	20	3	15	2								
cSH	1048	866	1607	1582								
Volume to Capacity	0.02	0.02	0.02	0.00								
Queue Length 95th (m)	0.5	0.5	0.5	0.0								
Control Delay (s)	8.5	9.2	3.7	0.6								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.5	9.2	3.7	0.6								
Approach LOS	A	A										
Intersection Summary												
Average Delay			5.0									
Intersection Capacity Utilization			20.7%		ICU Level of Service				A			
Analysis Period (min)			15									

Adelaide Street TIS  
3: Conestoga St N & Highway 6

Future (2028) Total Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	377	0	2	389	49	0	1	1	26	3	22
Future Volume (Veh/h)	16	377	0	2	389	49	0	1	1	26	3	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	410	0	2	423	53	0	1	1	28	3	24
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	476			410			923	924	410	899	898	450
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	476			410			923	924	410	899	898	450
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	89	99	96
cM capacity (veh/h)	1086			1149			235	265	642	255	274	610
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	427	478	2	55								
Volume Left	17	2	0	28								
Volume Right	0	53	1	24								
cSH	1086	1149	375	344								
Volume to Capacity	0.02	0.00	0.01	0.16								
Queue Length 95th (m)	0.4	0.0	0.1	4.5								
Control Delay (s)	0.5	0.1	14.7	17.5								
Lane LOS	A	A	B	C								
Approach Delay (s)	0.5	0.1	14.7	17.5								
Approach LOS			B	C								
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			47.6%	ICU Level of Service	A							
Analysis Period (min)			15									