James Dick Construction Limited

Traffic Impact Study

Eramosa Quarry

Project No. TR12-0013

April 2012

COLE ENGINEERING

Experience Enhancing Excellence

COLE ENGINEERING

Experience Enhancing Excellence

April 23, 2012
Our Ref: TR12-0013

James Dick Construction Limited
P.O. Box 470
Bolton, ON L7E 5T4

Attention: Mr. Greg Sweetnam, B.Sc.
Vice President, Resources

Dear Mr. Sweetnam:

Re: Traffic Impact Study
Eramosa Quarry
Township of Guelph-Eramosa

Cole Engineering Group Ltd. is pleased to submit this Traffic Impact Study in support of the proposed Eramosa Quarry. The study finds that the development is anticipated to generate a maximum of 26 two-way trips per hour and is expected to have minimal impact to the surrounding road network. The study also finds that the recommended access location is sufficient to serve the proposed development.

Yours truly,

COLE ENGINEERING GROUP LTD.

Kim Nystrom, L.E.L.
Principal

Joseph E. Gowrie, P.Eng.
Transportation Engineer

JG:dps

Encl.

\\data\shared\2012 Projects\TR\TR12-0013 JamesDick_Hwy7-6Conc_Eramosa\300-Design-Engineering\312-Deliverables\Project Deliverables\001_March 2012\2012 04 23 FINAL TIS.doc

Table of Contents

LIST OF FIGURES

LIST OF TABLES

APPENDICES

1.0 Study Background and Purpose

Cole Engineering Group Ltd. (Cole Engineering) was retained by James Dick Construction Limited (the "Owner") to undertake a Traffic and Access Study for the proposed Eramosa Quarry. The subject lands are approximately 39.4 hectares (97 acres) in area and are generally located on north of Highway 7 and east of 6th Line in the Township of Guelph-Eramosa (the "Township"), County of Wellington (the "County"). The general site location is provided in **Figure 1-1**.

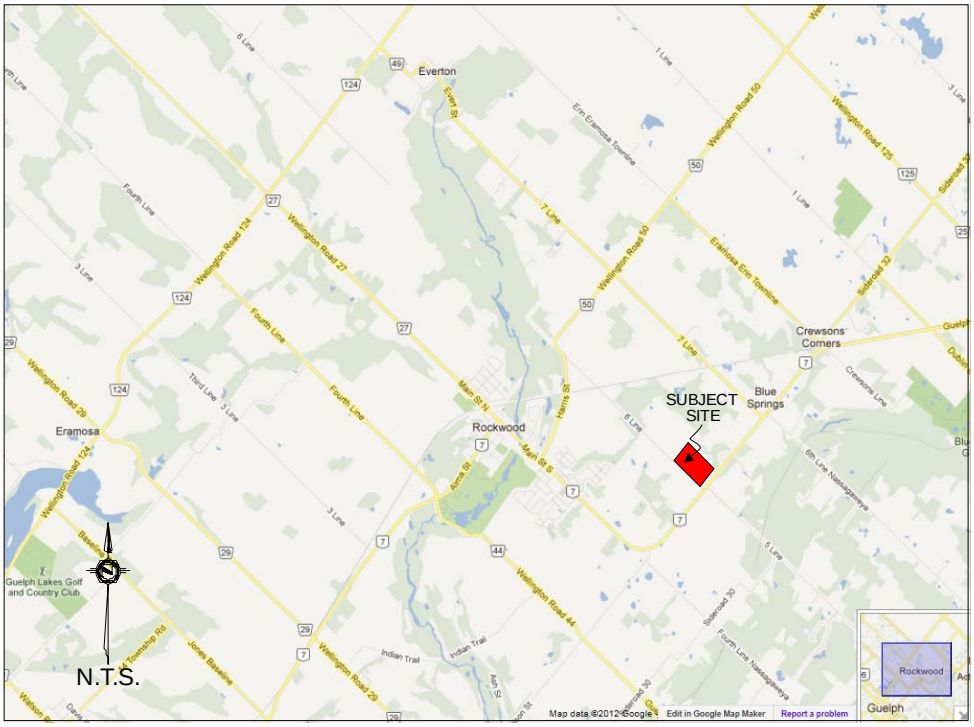


Figure 1-1 Proposed Site Location

James Dick Construction Limited has owned this property on the north side of Highway 7 for approximately 25 years. Currently the site is comprised of vegetation, several old gravel pits, and a small pond / wetland. The current zoning for the site is Agricultural and Hazard. Along the southern portion of the site, there is a house currently occupied by a tenant. Lands to the south are zoned Rural and Industrial. The lands to the east are zoned Industrial and Agricultural. Some industrial development is evident along Highway 7. There are no buildings or structures within the proposed extraction boundaries. The site will be serviced via a full movement access onto 6th Line. The proposed site plan is provided in **Figure 1-2**.

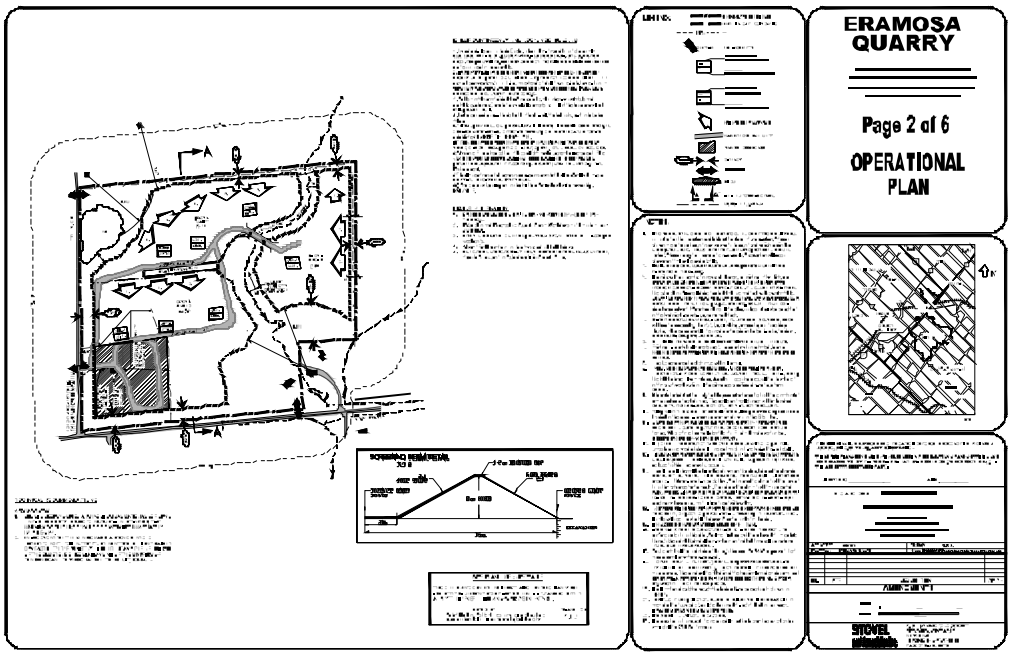


Figure 1-2 Conceptual Site Plan

The purposed of the Study is to:

- Estimate the traffic generated by the proposed quarry;
- Confirm the operations at the proposed access;
- Confirm the sufficiency of the sight line distances; and,
- Identify operational traffic deficiencies and recommend mitigation measures to remedy the conditions such as road, intersection, and geometric improvements.

2.0 Study Approach

2.1. Study Area

Based on the review of the site plan and the surrounding area, the study area intersections for this analysis and includes the following:

- Highway 7 / 6th Line (existing);
- Highway 7 / 5th Line (existing); and,
- 6th Line / Proposed Site Access (future).

2.2. Horizon Year

A five-year horizon was selected to represent future traffic conditions. A conservative growth rate of 2.5% per year was applied to all traffic movements within the study area as per discussions with Township staff.

3.0 Existing Traffic Conditions

3.1. Existing Road Network

As previously mentioned, the site is located on north of Highway 7 and east side of 6th Line. The existing lane configurations are illustrated in **Figure 3-1.**

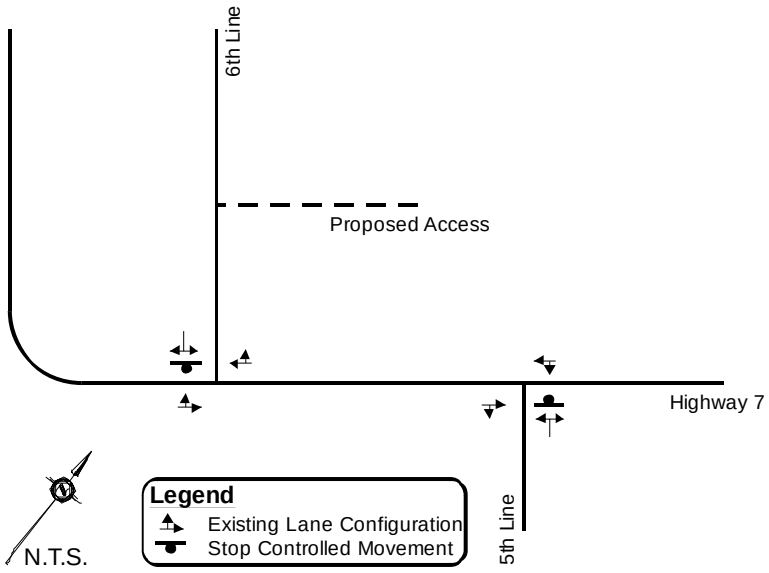


Figure 3-1 Existing Lane Configurations

The road network is detailed as follows:

Highway 7 is a two-lane east-west provincial highway within the vicinity of the subject site and is under the jurisdiction of the Ministry of Transportation of Ontario (MTO).

6th Line is a two-lane north-south gravel roadway under the jurisdiction of the Township of Guelph-Eramosa.

5th Line is a two-lane north-south paved roadway under the jurisdiction of the Township of Guelph-Eramosa.

3.2. Existing Traffic Assessment

The existing traffic volumes at the intersection of Hwy 7/6th Line was undertaken by Accu-Traffic Inc. (ATI) on behalf of Cole Engineering during the weekday morning peak period (7:00 am – 9:00 am) and weekday afternoon peak period (4:00 pm – 6:00 pm) on Tuesday, February 14, 2012. Existing traffic data is provided in **Appendix A** for reference.

3.3. Existing Traffic Conditions – Level of Service Analysis

Existing traffic volumes were analyzed using Synchro 6.0 software and are provided in **Figure 3-2**.

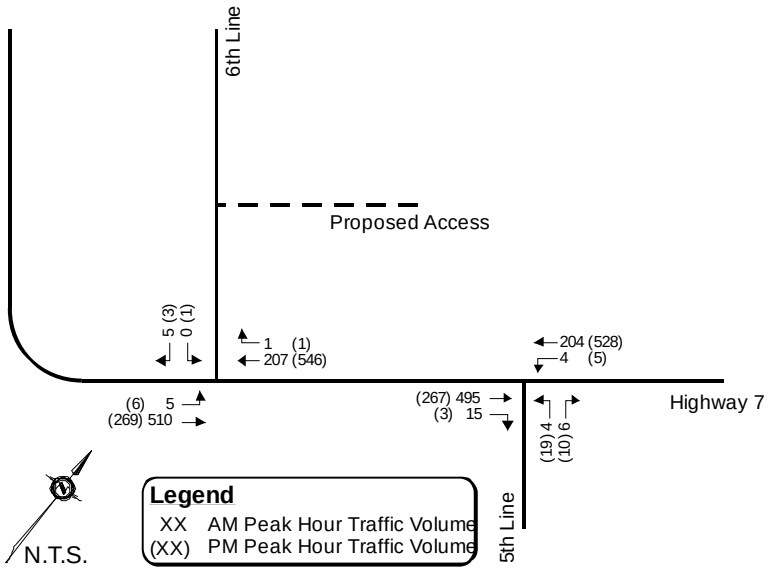


Figure 3-2 Existing Traffic Volumes

The results are summarized in **Table 3.1** and while detailed calculations are provided in **Appendix B**.

Table 3.1 – Existing Traffic Conditions – Levels of Service

Intersection	Key Movements	AM Peak Hour LOS (v/c)	PM Peak Hour LOS (v/c)
Highway 7 / 6th Line (Unsignalized)	EB left-through SB left-right	A (0.01) B (0.01)	A (0.01) B (0.02)
Highway 7 / 5th Line (Unsignalized)	WB left-through NB left-right	A (<0.01) B (0.02)	A (<0.01) B (0.07)

The results of the analysis indicates that all movements operate at good levels of service (LOS) during the weekday a.m. and p.m. peak periods with no movement nearing capacity.

4.0 Site Generated Traffic

4.1. Development Proposal

The proposed Eramosa Quarry is approximately 39.4 hectares (97 acres) in area and is proposed to be licensed to produce a maximum of 700,000 tones of aggregate per annum. The site will be serviced via a full movement access onto 6th Line.

4.2. Site Generated Traffic

Trip generation for the proposed Eramosa Quarry was estimated using a first principles assessment using information from other James Dick Construction facilities and represents a worst-case traffic assessment. The proposed quarry will supply a maximum of 700,000 tonnes of aggregate per year. It was assumed that based on the fleet of vehicles of the Owners, the average load of each truck will be approximately 33 tonnes or 21,213 trucks per year. The proposed quarry is to operate from Monday to Saturday excluding public holidays. The facility is also to operate from 6:00 a.m. to 6:00 p.m.

The site generated traffic of this study was estimated using data from the Erin Pit which produces 723,000 tonnes of aggregate per year which makes it a suitable proxy site for the Eramosa Quarry. Based on the data presented in **Figure 4-1**, the busiest month of operations is August.

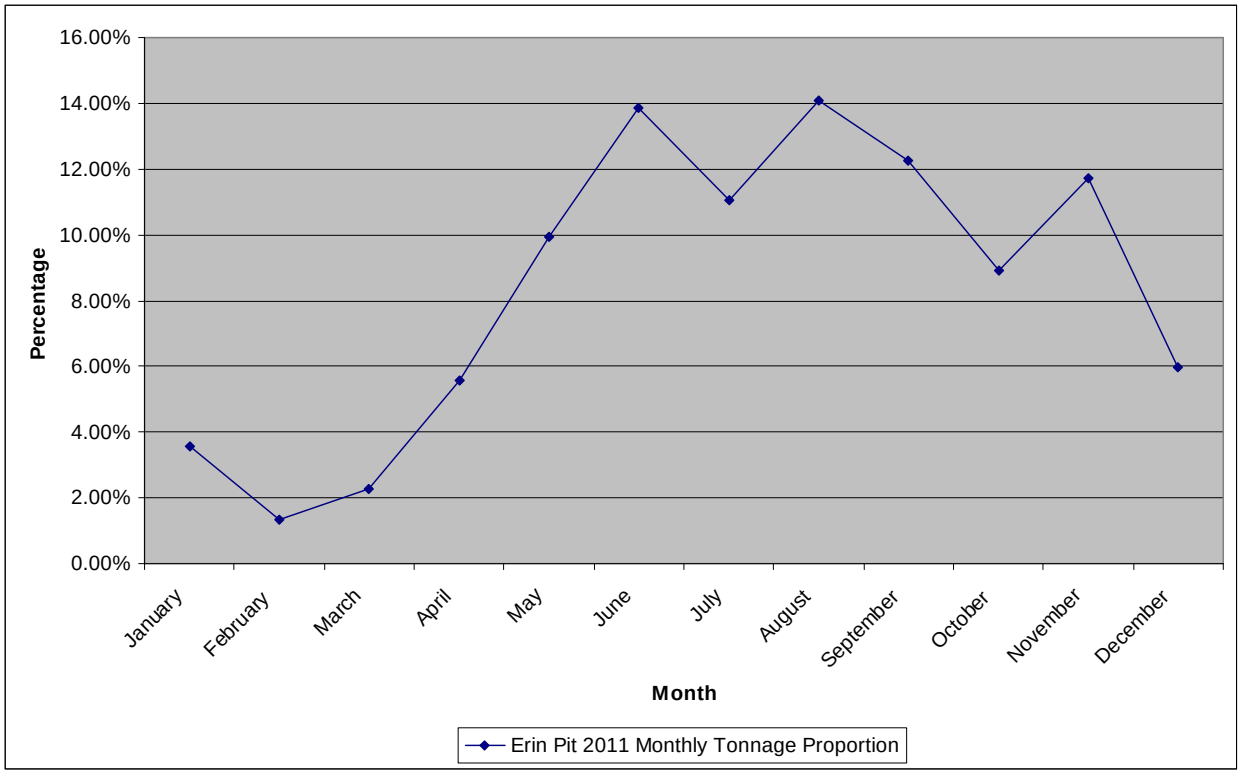


Figure 4-1 Erin Pit 2011 Monthly Tonnage Proportion

Applying the annual distribution of traffic as presented in **Figure 4-1** to the Eramosa Quarry, results in a peak of 107 trucks per day.

During the peak month, the trips to the site were further broken down to an hourly distribution using the information provided in **Figure 4-2**.

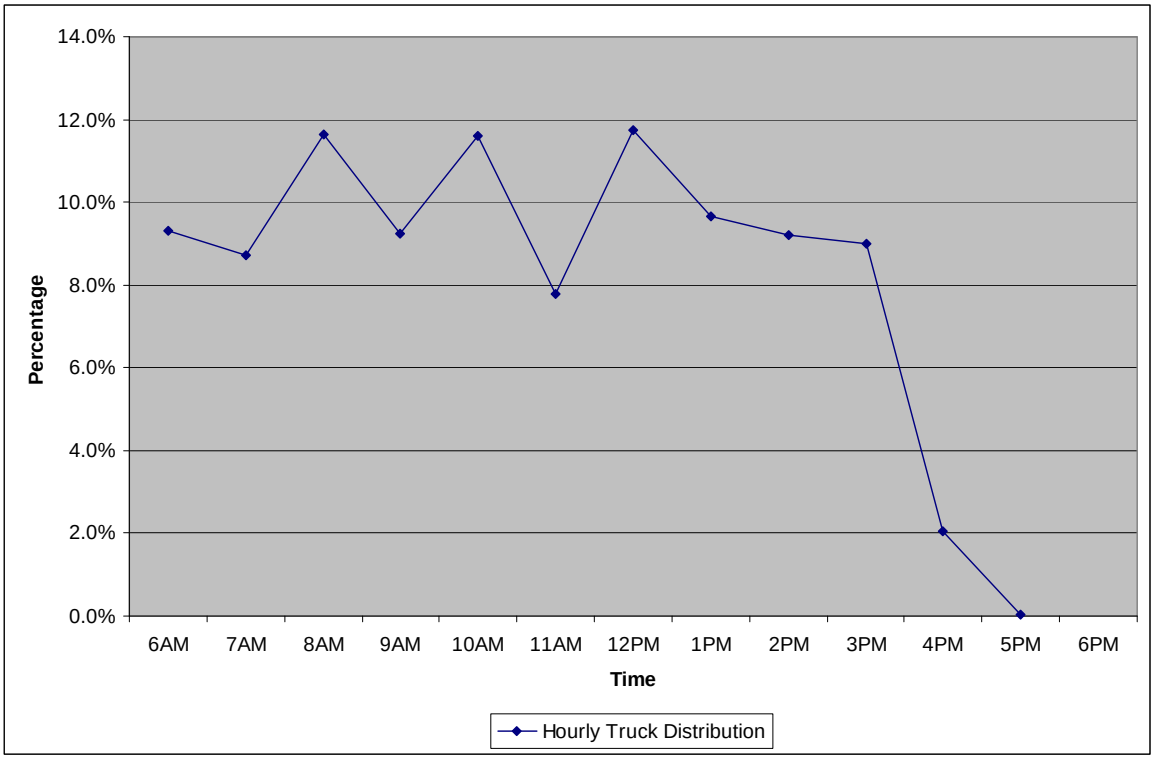


Figure 4-2 Hourly Truck Distribution

It is anticipated that the daily distribution of trucks arriving at the facility to be loaded will vary during certain hours of the day. For example, the first hour is anticipated to be the busiest hour of the day. This is because all trucks are arriving for the first load of the day. As the day wears on, trucks will become spread out as they service jobs that are varying distances from the quarry and the hourly trips will tend to even out. This trip generation pattern has been observed at other existing James Dick aggregate sites. It is anticipated that the morning peak hour from 6 a.m. to 7 a.m. will involve approximately 10% of daily trips. Thus, in the peak hour, approximately ten (10) trucks will be shipped on an average day. It has been observed that the hour from 7 a.m. to 8 a.m. is one of the lowest volume hours of the day. This is because the trucks loaded the previous peak hour are on their way to various job sites around the GTA. As such, it is anticipated that approximately five (5) to nine (9) percent of daily trips will be generated during this hour or approximately five (5) to nine (9) trucks arriving on an average day.

In the late afternoon, shipping drops off significantly, such that, trip generation is not significant during the p.m. peak. Most material has left the quarry prior to 4 p.m. due to the fact that it must arrive at the jobsite before the jobs shut down at 5 p.m. The last hour of the day sees only from 1% to 2.5% of the daily shipping taking place or one (1) to three (3) trucks. On very busy days this hourly peaking factor tends to even out and is less pronounced.

During the busiest hour of the day, 11.7% of the trucks, or 13 trucks, are expected to arrive at the facility. It is assumed that each truck trip is short in duration, therefore each truck trip will result in a total of two (2) trips per hour (one (1) inbound and one (1) outbound). Therefore, the proposed site will have 26 two-way (13 inbound and 13 outbound) trips during each of the analyzed peak hours. It is important to understand that this level of shipping is rarely likely to ever take place, but it provides a prudent upper limit to this analysis.

Because of the operating hours of the proposed facility, it is anticipated that the staff will arrive outside of the roadway peak hours.

4.3. Trip Distribution

Based on review of the available haul routes and the anticipated destinations of the materials, the trip distribution for the proposed development is provided in **Table 4.1.**

Table 4.1 – Trip Distribution

Direction (to / from)	Via	Distribution
North	Highway 7 6th Line	5% 0%
South	5th Line	0%
East	Highway 7	95%
West	--	--
Total		**100%**

The site traffic was assigned based on the above trip distribution and is illustrated in **Figure 4-3**.

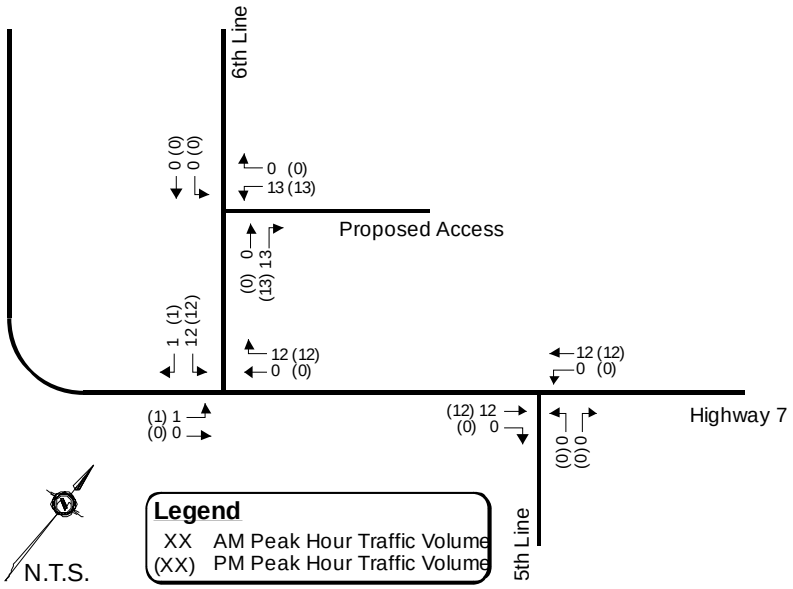


Figure 4-3 Site Traffic Volumes

4.4. Existing Plus Site-Related Traffic

The proposed development is anticipated to begin its operations in the 2012 horizon and as such an existing plus site related traffic condition is investigated. Existing plus site related traffic is illustrated in **Figure 4-4** and was assessed using *Synchro 6.0* software.

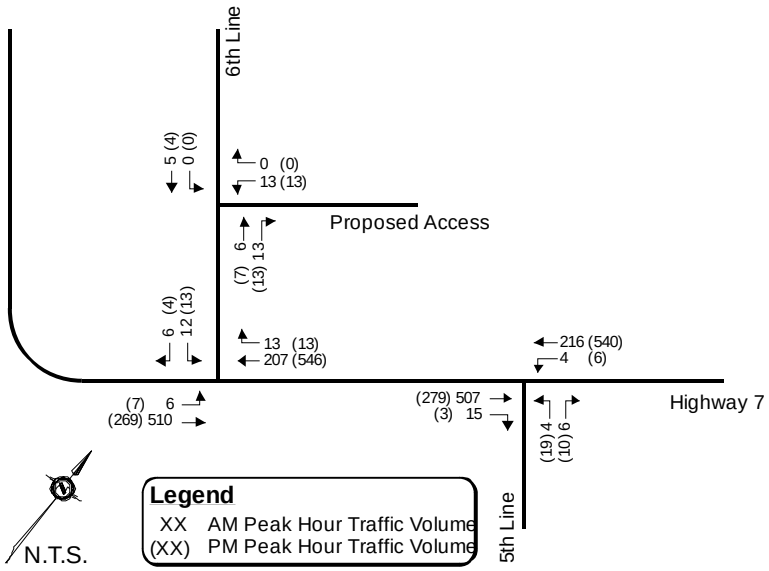


Figure 4-4 Existing Plus Site-Related Traffic Volumes

The detailed calculations are provided in **Appendix C** while summarized in **Table 4.2**.

Table 4.2 – Existing Plus Site-Related Traffic Conditions – Levels of Service

Intersection	Key Movements	AM Peak Hour LOS (v/c)	PM Peak Hour LOS (v/c)
Highway 7 / 6th Line (Unsignalized)	EB left-through SB left-right	A (0.01) C (0.09)	A (0.01) C (0.11)
Highway 7 / 5th Line (Unsignalized)	WB left-through NB left-right	A (<0.01) B (0.02)	A (<0.01) B (0.07)
6th Line / Proposed Access (Unsignalized)	WB left-right SB left-through	A (0.03) A (<0.01)	A (0.03) A (<0.01)

In the existing plus site-related traffic condition, the study area is expected to operate at good LOS with no movements nearing capacity.

5.0 Traffic Growth

Traffic growth within the study area consists of two (2) components: traffic generated due to other developments within / near the study area; and traffic growth outside of the study area. For the purposes of this study, there are no major background developments identified within the vicinity of the subject site. In addition, there is a 2.5% per annum growth rate applied to all movements within the study area which represents traffic growth from outside the study area.

6.0 Future Total Traffic Conditions

Future total traffic consists of traffic growth plus site-related traffic.

6.1. Future (2017) Total Traffic Conditions

Future (2017) total traffic is illustrated in **Figure 6-1** and was analyzed using *Synchro 6.0* software.

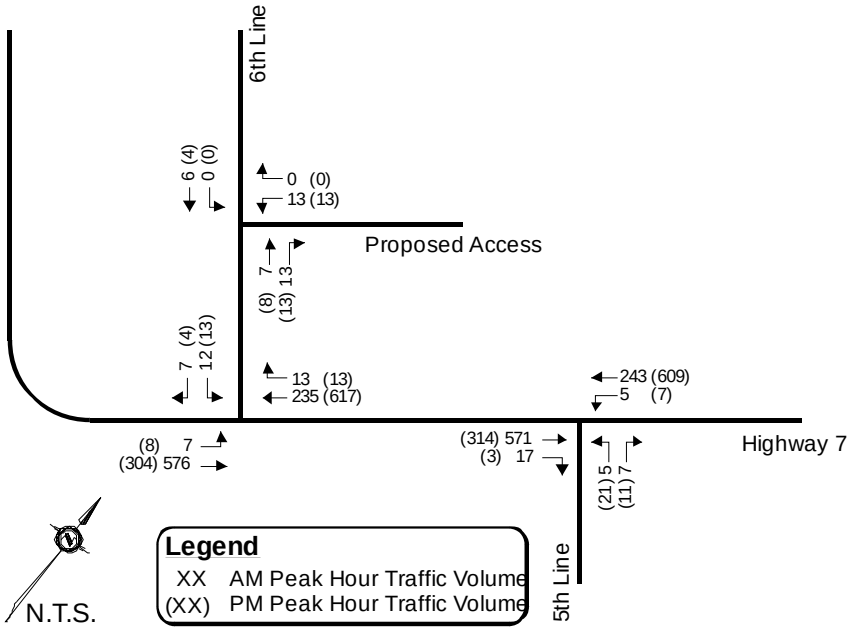


Figure 6-1 Future (2017) Total Traffic Volumes

The detailed calculations are provided in **Appendix D** and summarized in **Table 6.1**.

Table 6.1 – Future (2017) Traffic Conditions – Levels of Service

Intersection	Key Movements	AM Peak Hour LOS (v/c)	PM Peak Hour LOS (v/c)
Highway 7 / 6th Line (Unsignalized)	EB left-through	A (0.01)	A (0.01)
	SB left-right	C (0.11)	C (0.14)
Highway 7 / 5th Line (Unsignalized)	WB left-through	A (0.01)	A (0.01)
	NB left-right	B (0.03)	C (0.09)
6th Line / Proposed Access (Unsignalized)	WB left-right	A (0.03)	A (0.03)
	SB left-through	A (<0.01)	A (<0.01)

In the future (2017) total traffic condition, the study area intersections are all anticipated to continue to operate at good LOS with no movement operating near capacity.

6.2. Future (2022) Total Traffic Conditions

Future (2022) total traffic volumes are illustrated in **Figure 6-2** and were analyzed using *Synchro 6.0* software.

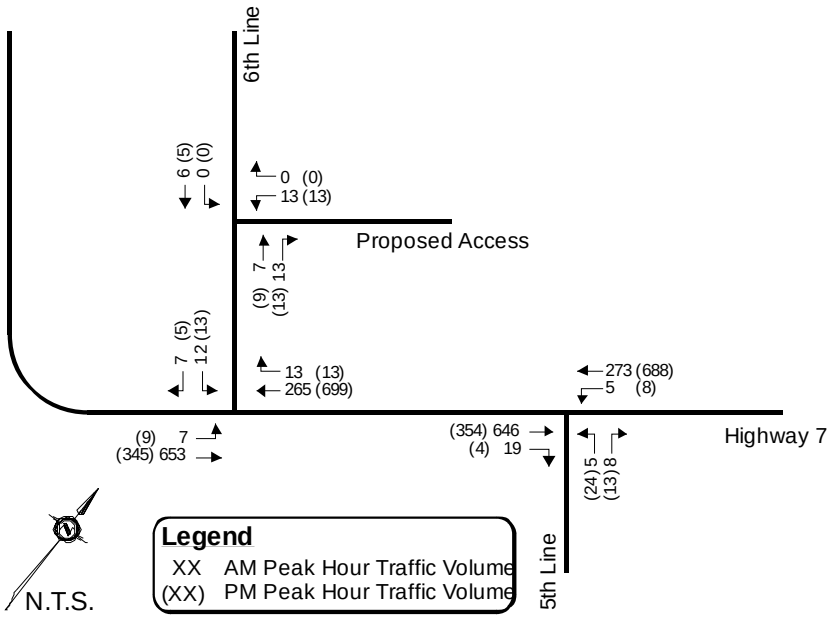


Figure 6-2 Future (2022) Total Traffic Volumes

The detailed calculations are provided in **Appendix E** and are summarized **Table 6.2**.

Table 6.2 – Future (2022) Total Traffic Conditions – Levels of Service

Intersection	Key Movements	AM Peak Hour LOS (v/c)	PM Peak Hour LOS (v/c)
Highway 7 / 6th Line (Unsignalized)	EB left-through	A (0.01)	A (0.01)
	SB left-right	C (0.13)	D (0.17)
Highway 7 / 5th Line (Unsignalized)	WB left-through	A (0.01)	A (0.01)
	NB left-right	C (0.04)	C (0.12)
6th Line / Proposed Access (Unsignalized)	WB left-right	A (0.03)	A (0.03)
	SB left-through	A (<0.01)	A (<0.01)

In the future (2022) total traffic condition, the study area intersections are expected to continue to operate at good LOS with no movements operating near capacity.

7.0 Access Analysis

The site access is proposed to be located on the east side of 6th Line in the Township of Guelph-Eramosa. 6th Line is currently a rolling and unpaved gravelled roadway with a no exit sign posted at Highway 7.

7.1. Site Access Location and Sight Distance

A sight line assessment was undertaken to determine the preferred location of the site access. The required minimum Stopping Sight Distance (SSD) was determined based on the information provided in the *Geometric Design Manual for Ontario Highways* published by MTO. An unposted speed of 50 km/h was assumed for the unpaved gravelled roadway which requires a minimum stopping sight distance of 85 meters.

Based upon the field survey conducted by Cole Engineering, it is recommended that the proposed access be located at the roadway crest which is located approximately 162 meters from Highway 7. There is 220 meters of sight distance available from the crest to the north which exceeds the required minimum sight distance for the proposed access. It should be noted that there is very little traffic anticipated north of the proposed quarry which is evident in the turning movement count. In addition, there is sight distance available from the roadway crest all the way to Highway 7.

7.2. Safety Consideration

Along Highway 7 at the 6th Line intersection, there is a right turn taper of approximately 25 meters. As a precaution for the safety of drivers along Highway 7, it is recommended that truck entrance signs be provided approximately 150 meters from 6th Line. These signs will be provided based on an 80 km/h posted speed limit as per guidelines from the *Ontario Traffic Manual, Book 6; Warning Signs*. An oversized truck warning sign (Wc-108) is recommended. The eastbound traffic shall have a Wc-108L sign while the westbound traffic shall have a Wc-108R sign indicting that the truck entrance will be on the side of Highway 7.

Similarly, truck entrance warning sign should be provided for through traffic on 6th Line for traffic approaching the proposed access. Since there is no posted speed limit on 6th Line, a standard size truck warning sign (Wc-8) is recommended as a precaution for vehicles approaching the proposed access. The southbound traffic shall have a Wc-8L sign while the northbound traffic shall have a Wc-8R sign indicting that the truck entrance will be on the left and right side, respectively. Assuming an unposted speed limit of 50 km/h, the *Ontario Traffic Manual, Book 6* stated that the truck entrance warning sign shall be placed at a minimum distance of 95 meters from the site access.

8.0 Conclusions

From the analysis undertaken, out findings and conclusions are as follows:

- Existing traffic within the study area operates at good levels of service with no movements nearing capacity;
- The gravel pit is expected to generate 26 truck trips (13 truck trips in / 13 truck trips out) during each of the analyzed peak periods;
- Employees of the future gravel pit are anticipated to arrive outside of the roadway peak hours;
- The proposed gravel pit is anticipated to have minimal impact on the surrounding road network;
- The study area intersections are expected to operate at good levels of service in the existing plus site, future (2017) total traffic and future (2022) total traffic conditions;
- It is recommended that the proposed access be located at the roadway crest to maximize visibility of the driveway; and,
- It is recommended that oversized truck entrance signs be placed along Highway 7 in approach to 6th Line while standard truck entrance signs be placed on 6th Line.

APPENDIX A
Existing Traffic Data

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:15:00
To: 8:15:00

Municipality: Eramosa
Site #: 1202400002
Intersection: Hwy 7 & 5 Line
TFR File #: 5
Count date: 17-Feb-12

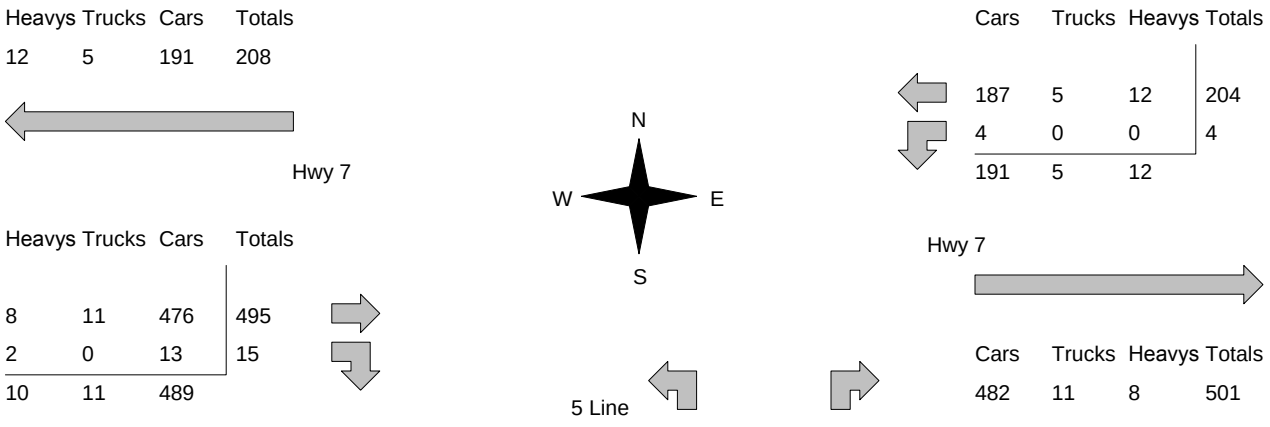
Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: Hwy 7 runs W/E

East Leg Total: 709
East Entering: 208
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 510
West Leg Total: 718

Cars 17
Trucks 0
Heavys 2
Totals 19

Cars 4 6 10
Trucks 0 0 0
Heavys 0 0 0
Totals 4 6

Peds Cross: ⋈
South Peds: 0
South Entering: 10
South Leg Total: 29

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Eramosa
Site #: 1202400002
Intersection: Hwy 7 & 5 Line
TFR File #: 5
Count date: 17-Feb-12

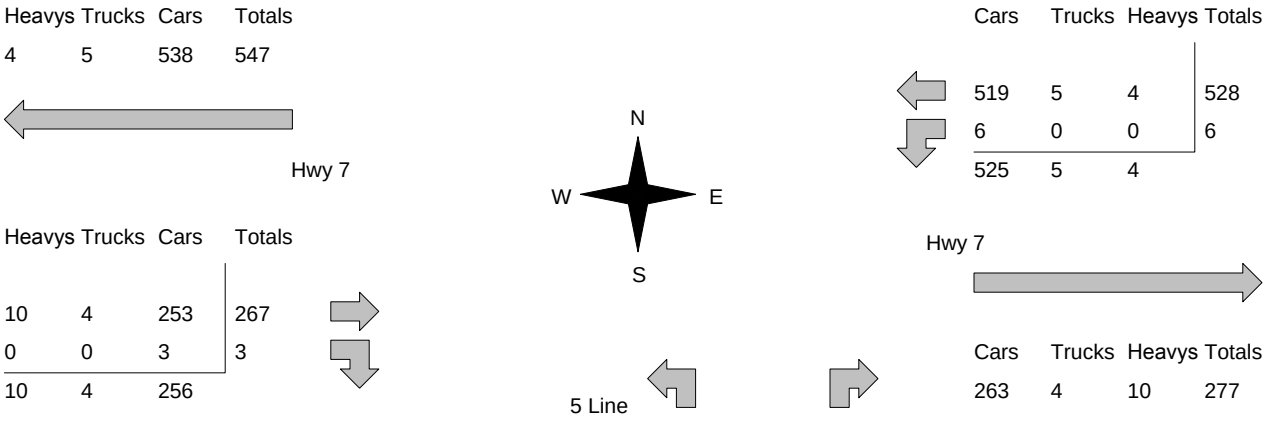
Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: Hwy 7 runs W/E

East Leg Total: 811
East Entering: 534
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 270
West Leg Total: 817

Cars 9
Trucks 0
Heavys 0
Totals 9

Cars 19 10 29
Trucks 0 0 0
Heavys 0 0 0
Totals 19 10

Peds Cross: ⋈
South Peds: 0
South Entering: 29
South Leg Total: 38

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Total Count Diagram

Municipality: Eramosa
Site #: 1202400002
Intersection: Hwy 7 & 5 Line
TFR File #: 5
Count date: 17-Feb-12

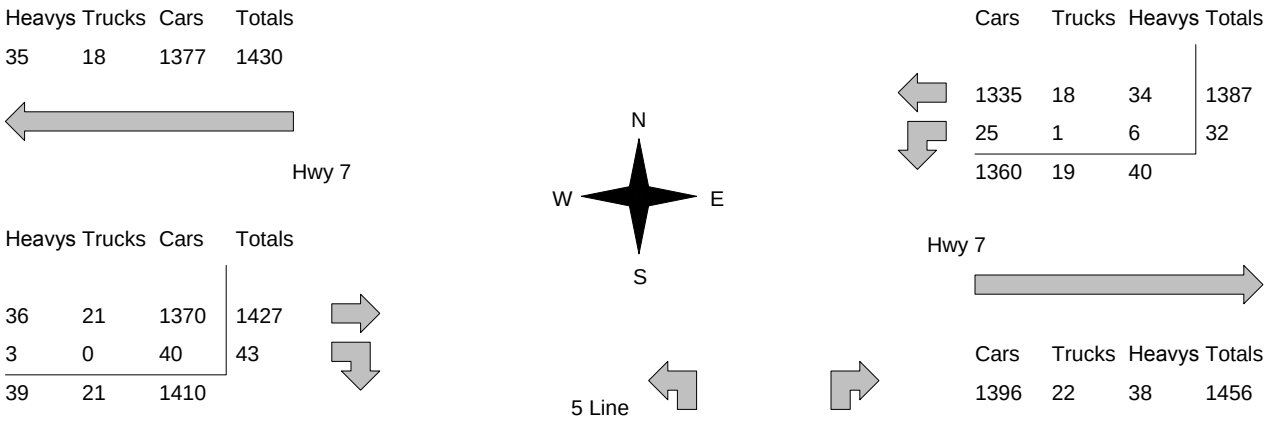
Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

Major Road: Hwy 7 runs W/E

East Leg Total: 2875
East Entering: 1419
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 1470
West Leg Total: 2900

Cars 65
Trucks 1
Heavys 9
Totals 75

Cars 42 26 68
Trucks 0 1 1
Heavys 1 2 3
Totals 43 29

Peds Cross: ⋈
South Peds: 1
South Entering: 72
South Leg Total: 147

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.
Traffic Count Summary

Intersection: Hwy 7 & 5 Line | **Count Date:** 17-Feb-12 | **Municipality:** Eramosa

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	North/South Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	0	0	0	0	0	12
9:00:00	0	0	0	0	0	11
16:00:00	0	0	0	0	0	0
17:00:00	0	0	0	0	0	27
18:00:00	0	0	0	0	0	22
Totals:	0	0	0	0	0	72

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	3	0	9	12	0
9:00:00	5	0	6	11	1
16:00:00	0	0	0	0	0
17:00:00	19	0	8	27	0
18:00:00	16	0	6	22	0
Totals:	43	0	29	72	1

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds	East/West Total Approaches
7:00:00	0	0	0	0	0	0
8:00:00	5	185	0	190	0	696
9:00:00	9	207	0	216	0	653
16:00:00	0	1	0	1	0	2
17:00:00	11	478	0	489	0	746
18:00:00	7	516	0	523	0	792
Totals:	32	1387	0	1419	0	2889

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys: Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	493	13	506	0
9:00:00	0	420	17	437	0
16:00:00	0	1	0	1	0
17:00:00	0	247	10	257	0
18:00:00	0	266	3	269	0
Totals:	0	1427	43	1470	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	18:00	18:00	18:00
Crossing Values:	0	3	5	0	19	16	16	16

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 17-Feb-12 Site #: 1202400002

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 17-Feb-12 Site #: 1202400002

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	31	31	0	0	0	0	1	1	0	0	1	1	2	2	0	0	0	0
7:30:00	2	1	72	41	0	0	0	0	2	1	0	0	1	0	5	3	0	0	0	0
7:45:00	2	0	116	44	0	0	0	0	3	1	0	0	1	0	7	2	0	0	0	0
8:00:00	4	2	172	56	0	0	0	0	4	1	0	0	1	0	9	2	0	0	0	0
8:15:00	5	1	218	46	0	0	0	0	6	2	0	0	1	0	14	5	0	0	0	0
8:30:00	6	1	270	52	0	0	0	0	7	1	0	0	3	2	17	3	0	0	0	0
8:45:00	7	1	314	44	0	0	0	0	9	2	0	0	3	0	19	2	0	0	0	0
9:00:00	10	3	360	46	0	0	0	0	10	1	0	0	4	1	22	3	0	0	0	0
9:00:21	10	0	360	0	0	0	0	0	10	0	0	0	4	0	22	0	0	0	0	0
16:00:00	10	0	361	1	0	0	0	0	10	0	0	0	4	0	22	0	0	0	0	0
16:15:00	13	3	479	118	0	0	0	0	11	1	0	0	4	0	24	2	0	0	0	0
16:30:00	14	1	591	112	0	0	0	0	11	0	0	0	4	0	26	2	0	0	0	0
16:45:00	17	3	706	115	0	0	1	1	12	1	0	0	5	1	29	3	0	0	0	0
17:00:00	19	2	827	121	0	0	1	0	14	2	0	0	5	0	30	1	0	0	0	0
17:15:00	20	1	961	134	0	0	1	0	15	1	0	0	5	0	30	0	0	0	0	0
17:30:00	22	2	1096	135	0	0	1	0	15	0	0	0	5	0	32	2	0	0	0	0
17:45:00	23	1	1225	129	0	0	1	0	17	2	0	0	5	0	33	1	0	0	0	0
18:00:00	25	2	1335	110	0	0	1	0	18	1	0	0	6	1	34	1	0	0	0	0
18:15:00	25	0	1335	0	0	0	1	0	18	0	0	0	6	0	34	0	0	0	0	0
18:15:18	25	0	1335	0	0	0	1	0	18	0	0	0	6	0	34	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 17-Feb-12 Site #: 1202400002

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	1	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	0	0
7:30:00	2	1	0	0	4	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:45:00	2	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:00:00	3	1	0	0	8	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:15:00	5	2	0	0	9	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:30:00	5	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0
8:45:00	6	1	0	0	11	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0
9:00:00	8	2	0	0	13	2	0	0	0	0	0	0	0	0	0	0	2	0	1	1
9:00:21	8	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0
16:00:00	8	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0
16:15:00	11	3	0	0	14	1	0	0	0	0	0	0	0	0	0	0	2	0	1	0
16:30:00	16	5	0	0	14	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0
16:45:00	21	5	0	0	15	1	0	0	0	0	1	1	1	1	0	0	2	0	1	0
17:00:00	26	5	0	0	20	5	0	0	0	0	1	0	1	0	0	0	2	0	1	0
17:15:00	29	3	0	0	22	2	0	0	0	0	1	0	1	0	0	0	2	0	1	0
17:30:00	35	6	0	0	22	0	0	0	0	0	1	0	1	0	0	0	2	0	1	0
17:45:00	40	5	0	0	25	3	0	0	0	0	1	0	1	0	0	0	2	0	1	0
18:00:00	42	2	0	0	26	1	0	0	0	0	1	0	1	0	0	0	2	0	1	0
18:15:00	42	0	0	0	26	0	0	0	0	0	1	0	1	0	0	0	2	0	1	0
18:15:18	42	0	0	0	26	0	0	0	0	0	1	0	1	0	0	0	2	0	1	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 17-Feb-12 Site #: 1202400002

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	114	114	2	2	0	0	1	1	0	0	0	0	1	1	0	0	0	0
7:30:00	0	0	234	120	2	0	0	0	3	2	0	0	0	0	3	2	0	0	0	0
7:45:00	0	0	360	126	3	1	0	0	5	2	0	0	0	0	6	3	0	0	0	0
8:00:00	0	0	479	119	11	8	0	0	7	2	0	0	0	0	7	1	2	2	0	0
8:15:00	0	0	590	111	15	4	0	0	12	5	0	0	0	0	9	2	2	0	0	0
8:30:00	0	0	692	102	19	4	0	0	14	2	0	0	0	0	10	1	2	0	0	0
8:45:00	0	0	787	95	22	3	0	0	15	1	0	0	0	0	13	3	2	0	0	0
9:00:00	0	0	883	96	27	5	0	0	15	0	0	0	0	0	15	2	3	1	0	0
9:00:21	0	0	883	0	27	0	0	0	15	0	0	0	0	0	15	0	3	0	0	0
16:00:00	0	0	884	1	27	0	0	0	15	0	0	0	0	0	15	0	3	0	0	0
16:15:00	0	0	935	51	29	2	0	0	15	0	0	0	0	0	17	2	3	0	0	0
16:30:00	0	0	994	59	33	4	0	0	16	1	0	0	0	0	21	4	3	0	0	0
16:45:00	0	0	1056	62	35	2	0	0	16	0	0	0	0	0	23	2	3	0	0	0
17:00:00	0	0	1118	62	37	2	0	0	17	1	0	0	0	0	26	3	3	0	0	0
17:15:00	0	0	1177	59	37	0	0	0	19	2	0	0	0	0	28	2	3	0	0	0
17:30:00	0	0	1242	65	37	0	0	0	20	1	0	0	0	0	31	3	3	0	0	0
17:45:00	0	0	1309	67	38	1	0	0	20	0	0	0	0	0	33	2	3	0	0	0
18:00:00	0	0	1370	61	40	2	0	0	21	1	0	0	0	0	36	3	3	0	0	0
18:15:00	0	0	1370	0	40	0	0	0	21	0	0	0	0	0	36	0	3	0	0	0
18:15:18	0	0	1370	0	40	0	0	0	21	0	0	0	0	0	36	0	3	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:15:00
To: 8:15:00

Municipality: Eramosa
Site #: 1202400001
Intersection: Hwy 7 & 6th Line
TFR File #: 3
Count date: 14-Feb-12

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

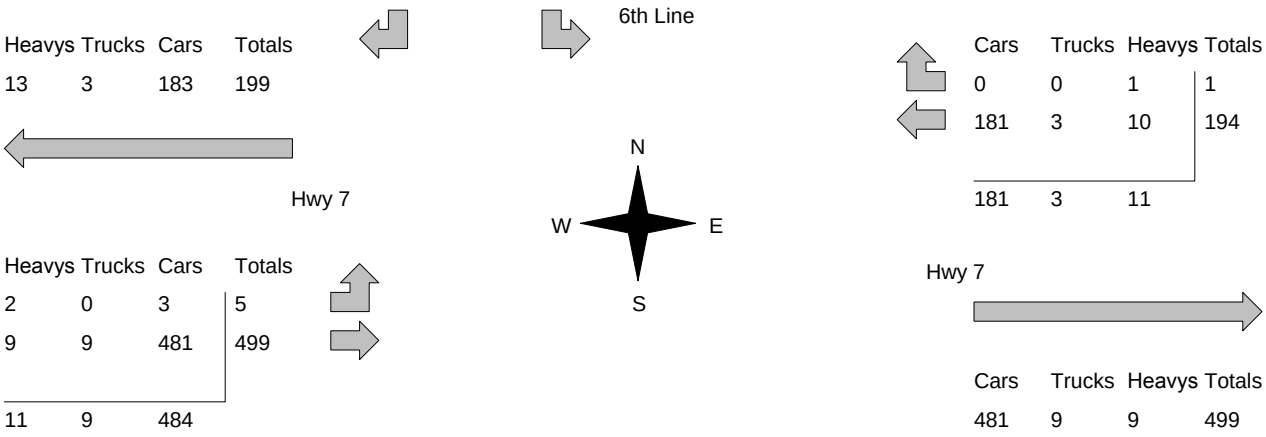
Major Road: Hwy 7 runs W/E

North Leg Total: 11
North Entering: 5
North Peds: 0
Peds Cross: ⋈

Heavys	3	0	3
Trucks	0	0	0
Cars	2	0	2
Totals	5	0	

Heavys	3
Trucks	0
Cars	3
Totals	6

East Leg Total: 694
East Entering: 195
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 504
West Leg Total: 703

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Municipality: Eramosa
Site #: 1202400001
Intersection: Hwy 7 & 6th Line
TFR File #: 3
Count date: 14-Feb-12

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

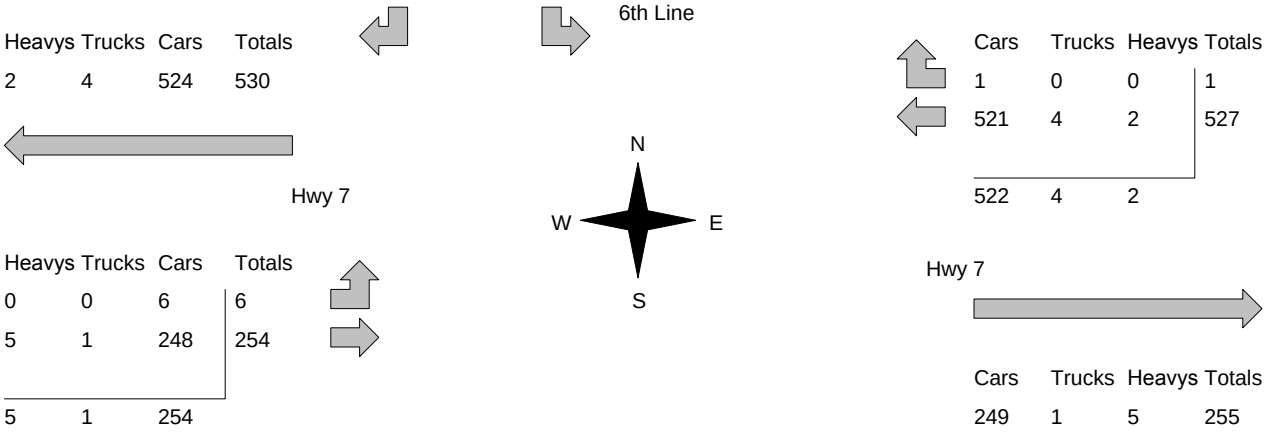
Major Road: Hwy 7 runs W/E

North Leg Total: 11
North Entering: 4
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0
Trucks	0	0	0
Cars	3	1	4
Totals	3	1	

Heavys	0
Trucks	0
Cars	7
Totals	7

East Leg Total: 783
East Entering: 528
East Peds: 0
Peds Cross: ⧖



Heavys	Trucks	Cars	Totals
2	4	524	530

Cars	Trucks	Heavys	Totals
1	0	0	1
521	4	2	527
522	4	2	

Heavys	Trucks	Cars	Totals
0	0	6	6
5	1	248	254
5	1	254	

Cars	Trucks	Heavys	Totals
249	1	5	255

Peds Cross: ⧖
West Peds: 0
West Entering: 260
West Leg Total: 790

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Total Count Diagram

Municipality: Eramosa
Site #: 1202400001
Intersection: Hwy 7 & 6th Line
TFR File #: 3
Count date: 14-Feb-12

Weather conditions:

Person(s) who counted:

**** Non-Signalized Intersection ****

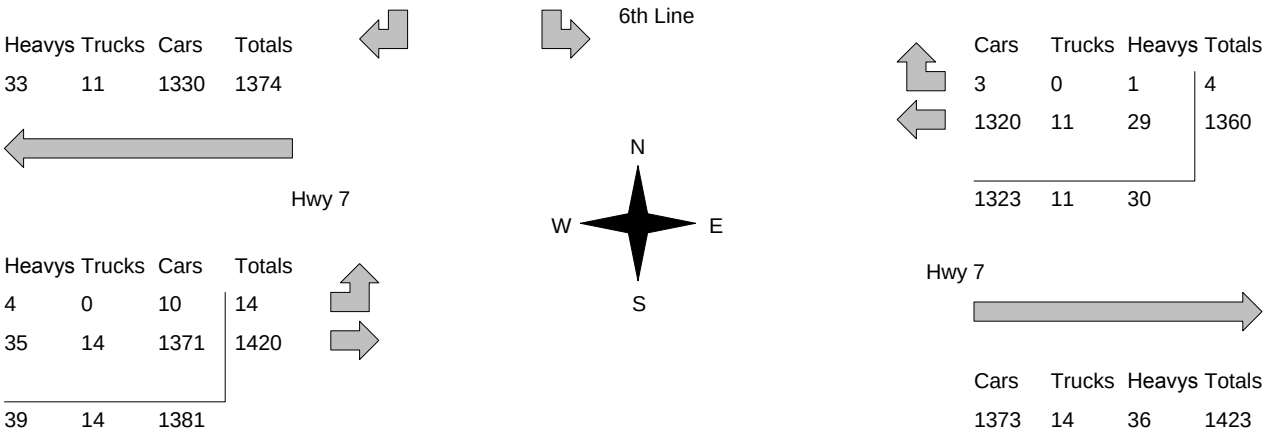
Major Road: Hwy 7 runs W/E

North Leg Total:	35		
North Entering:	17		
North Peds:	0		
Peds Cross:	⋈		

Heavys	4	1	5
Trucks	0	0	0
Cars	10	2	12
Totals	14	3	

Heavys	5		
Trucks	0		
Cars	13		
Totals	18		

East Leg Total:	2787		
East Entering:	1364		
East Peds:	0		
Peds Cross:	⧖		



Peds Cross:	⧖
West Peds:	0
West Entering:	1434
West Leg Total:	2808

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.
Traffic Count Summary

Intersection: Hwy 7 & 6th Line | **Count Date:** 14-Feb-12 | **Municipality:** Eramosa

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	0	4	4	0
9:00:00	0	0	4	4	0
16:00:00	0	0	0	0	0
17:00:00	1	0	4	5	0
18:00:00	2	0	2	4	0
Totals:	3	0	14	17	0

North/South Total Approaches: 17

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0
9:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0
17:00:00	0	0	0	0	0
18:00:00	0	0	0	0	0
	0	0	0	0	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	0	0	0	0
8:00:00	0	181	1	182	0
9:00:00	0	186	0	186	0
16:00:00	0	1	0	1	0
17:00:00	0	476	2	478	0
18:00:00	0	515	1	516	0
Totals:	0	1359	4	1363	0

East/West Total Approaches: 2797

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys Left	Thru	Right	Grand Total	Total Peds
7:00:00	0	2	0	2	0
8:00:00	3	509	0	512	0
9:00:00	2	414	0	416	0
16:00:00	1	2	0	3	0
17:00:00	3	251	0	254	0
18:00:00	5	242	0	247	0
	14	1420	0	1434	0

Calculated Values for Traffic Crossing Major Street

Hours Ending:	7:00	8:00	9:00	16:00	17:00	18:00	18:00	18:00
Crossing Values:	0	0	0	0	1	2	2	2

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 14-Feb-12 Site #: 1202400001

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
8:00:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0
8:15:00	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1	0	0
8:30:00	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0
8:45:00	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
9:00:00	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
9:00:09	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
15:45:00	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
16:00:00	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
16:15:00	0	0	0	0	5	0	0	0	0	0	0	0	1	1	0	0	4	1	0	0
16:30:00	0	0	0	0	6	1	0	0	0	0	0	0	1	0	0	0	4	0	0	0
16:45:00	0	0	0	0	7	1	0	0	0	0	0	0	1	0	0	0	4	0	0	0
17:00:00	0	0	0	0	8	1	0	0	0	0	0	0	1	0	0	0	4	0	0	0
17:15:00	0	0	0	0	10	2	0	0	0	0	0	0	1	0	0	0	4	0	0	0
17:30:00	0	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0
17:45:00	1	1	0	0	10	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0
18:00:00	2	1	0	0	10	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0
18:15:00	2	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0
18:15:26	2	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 14-Feb-12 Site #: 1202400001

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	28	28	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
7:30:00	0	0	68	40	0	0	0	0	1	1	0	0	0	0	2	1	0	0	0	0
7:45:00	0	0	120	52	0	0	0	0	3	2	0	0	0	0	5	3	1	1	0	0
8:00:00	0	0	170	50	0	0	0	0	3	0	0	0	0	0	8	3	1	0	0	0
8:15:00	0	0	209	39	0	0	0	0	3	0	0	0	0	0	11	3	1	0	0	0
8:30:00	0	0	257	48	0	0	0	0	4	1	0	0	0	0	13	2	1	0	0	0
8:45:00	0	0	299	42	0	0	0	0	5	1	0	0	0	0	13	0	1	0	0	0
9:00:00	0	0	347	48	0	0	0	0	5	0	0	0	0	0	15	2	1	0	0	0
9:00:09	0	0	347	0	0	0	0	0	5	0	0	0	0	0	15	0	1	0	0	0
15:45:00	0	0	347	0	0	0	0	0	5	0	0	0	0	0	15	0	1	0	0	0
16:00:00	0	0	348	1	0	0	0	0	5	0	0	0	0	0	15	0	1	0	0	0
16:15:00	0	0	472	124	0	0	0	0	5	0	0	0	0	0	18	3	1	0	0	0
16:30:00	0	0	579	107	1	1	0	0	6	1	0	0	0	0	21	3	1	0	0	0
16:45:00	0	0	692	113	2	1	0	0	7	1	0	0	0	0	25	4	1	0	0	0
17:00:00	0	0	809	117	2	0	0	0	8	1	0	0	0	0	27	2	1	0	0	0
17:15:00	0	0	936	127	3	1	0	0	9	1	0	0	0	0	27	0	1	0	0	0
17:30:00	0	0	1083	147	3	0	0	0	11	2	0	0	0	0	27	0	1	0	0	0
17:45:00	0	0	1213	130	3	0	0	0	11	0	0	0	0	0	27	0	1	0	0	0
18:00:00	0	0	1319	106	3	0	0	0	11	0	0	0	0	0	29	2	1	0	0	0
18:15:00	0	0	1320	1	3	0	0	0	11	0	0	0	0	0	29	0	1	0	0	0
18:15:26	0	0	1320	0	3	0	0	0	11	0	0	0	0	0	29	0	1	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

Count Date: 14-Feb-12 Site #: 1202400001

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15:26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis
www.accu-traffic.ca
Tel: 1-416-910-0171
Fax: 1-888-711-3125

Accu-Traffic Inc.

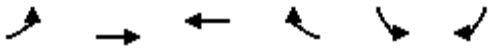
Count Date: 14-Feb-12 Site #: 1202400001

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	121	119	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	0
7:30:00	0	0	231	110	0	0	0	0	3	1	0	0	0	0	4	2	0	0	0	0
7:45:00	0	0	371	140	0	0	0	0	4	1	0	0	0	0	6	2	0	0	0	0
8:00:00	2	2	494	123	0	0	0	0	7	3	0	0	1	1	10	4	0	0	0	0
8:15:00	3	1	602	108	0	0	0	0	11	4	0	0	2	1	11	1	0	0	0	0
8:30:00	3	0	697	95	0	0	0	0	11	0	0	0	2	0	13	2	0	0	0	0
8:45:00	3	0	785	88	0	0	0	0	11	0	0	0	2	0	17	4	0	0	0	0
9:00:00	3	0	894	109	0	0	0	0	12	1	0	0	2	0	19	2	0	0	0	0
9:00:09	3	0	895	1	0	0	0	0	12	0	0	0	2	0	19	0	0	0	0	0
15:45:00	3	0	895	0	0	0	0	0	12	0	0	0	2	0	19	0	0	0	0	0
16:00:00	3	0	896	1	0	0	0	0	12	0	0	0	3	1	19	0	0	0	0	0
16:15:00	3	0	944	48	0	0	0	0	12	0	0	0	4	1	22	3	0	0	0	0
16:30:00	4	1	1008	64	0	0	0	0	12	0	0	0	4	0	25	3	0	0	0	0
16:45:00	4	0	1066	58	0	0	0	0	13	1	0	0	4	0	28	3	0	0	0	0
17:00:00	5	1	1132	66	0	0	0	0	14	1	0	0	4	0	32	4	0	0	0	0
17:15:00	7	2	1189	57	0	0	0	0	14	0	0	0	4	0	32	0	0	0	0	0
17:30:00	10	3	1250	61	0	0	0	0	14	0	0	0	4	0	32	0	0	0	0	0
17:45:00	10	0	1314	64	0	0	0	0	14	0	0	0	4	0	33	1	0	0	0	0
18:00:00	10	0	1371	57	0	0	0	0	14	0	0	0	4	0	35	2	0	0	0	0
18:15:00	10	0	1371	0	0	0	0	0	14	0	0	0	4	0	35	0	0	0	0	0
18:15:26	10	0	1371	0	0	0	0	0	14	0	0	0	4	0	35	0	0	0	0	0

APPENDIX B

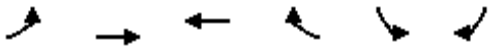
Existing Traffic

Level Of Service Calculations



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	5	510	207	1	0	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Heavy Vehicles (%)	40%	4%	8%	100%	2%	60%
Lane Group Flow (vph)	0	592	239	0	8	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	510	207	1	0	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Hourly flow rate (vph)	6	586	238	1	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	239				836	239
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	239				836	239
tC, single (s)	4.5				6.4	6.8
tC, 2 stage (s)						
tF (s)	2.6				3.5	3.8
p0 queue free %	99				100	99
cM capacity (veh/h)	1134				335	677

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	592	239	8
Volume Left	6	0	0
Volume Right	0	1	8
cSH	1134	1700	677
Volume to Capacity	0.01	0.14	0.01
Queue Length (m)	0.1	0.0	0.3
Control Delay (s)	0.1	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

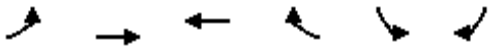
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	495	15	4	204	4	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	13%	0%	8%	0%	0%
Lane Group Flow (vph)	548	0	0	223	10	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	495	15	4	204	4	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	532	16	4	219	4	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			548		768	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			548		768	540
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1031		371	545

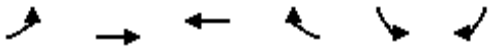
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	548	224	11
Volume Left	0	4	4
Volume Right	16	0	6
cSH	1700	1031	459
Volume to Capacity	0.32	0.00	0.02
Queue Length (m)	0.0	0.1	0.5
Control Delay (s)	0.0	0.2	13.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	13.0
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	6	269	546	1	1	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Heavy Vehicles (%)	0%	5%	2%	0%	0%	0%
Lane Group Flow (vph)	0	295	588	0	7	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	269	546	1	1	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	6	289	587	1	2	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	588				890	588
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	588				890	588
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	997				314	513

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	296	588	7
Volume Left	6	0	2
Volume Right	0	1	5
cSH	997	1700	443
Volume to Capacity	0.01	0.35	0.02
Queue Length (m)	0.1	0.0	0.3
Control Delay (s)	0.3	0.0	13.3
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	13.3
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	267	3	6	528	19	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	0%	0%	2%	0%	0%
Lane Group Flow (vph)	278	0	0	550	30	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	267	3	6	528	19	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	275	3	6	544	20	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			278		834	277
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			278		834	277
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	99
cM capacity (veh/h)			1296		339	767

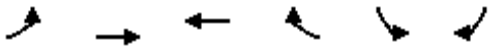
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	278	551	30
Volume Left	0	6	20
Volume Right	3	0	10
cSH	1700	1296	420
Volume to Capacity	0.16	0.00	0.07
Queue Length (m)	0.0	0.1	1.7
Control Delay (s)	0.0	0.1	14.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	14.2
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C

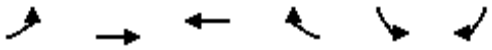
Existing Plus Site Traffic

Level Of Service Calculations



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	6	510	207	13	12	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Heavy Vehicles (%)	50%	4%	8%	16%	100%	67%
Lane Group Flow (vph)	0	593	253	0	27	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	510	207	13	12	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Hourly flow rate (vph)	7	586	238	15	18	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	253				845	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	253				845	245
tC, single (s)	4.6				7.4	6.9
tC, 2 stage (s)						
tF (s)	2.7				4.4	3.9
p0 queue free %	99				92	99
cM capacity (veh/h)	1078				229	658

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	593	253	28
Volume Left	7	0	18
Volume Right	0	15	9
cSH	1078	1700	293
Volume to Capacity	0.01	0.15	0.09
Queue Length (m)	0.1	0.0	2.4
Control Delay (s)	0.2	0.0	18.6
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	18.6
Approach LOS			C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	507	15	4	216	4	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	13%	0%	13%	0%	0%
Lane Group Flow (vph)	561	0	0	236	10	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	507	15	4	216	4	6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	545	16	4	232	4	6
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			561		794	553
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			561		794	553
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1020		358	536

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	561	237	11
Volume Left	0	4	4
Volume Right	16	0	6
cSH	1700	1020	447
Volume to Capacity	0.33	0.00	0.02
Queue Length (m)	0.0	0.1	0.6
Control Delay (s)	0.0	0.2	13.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	13.2
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

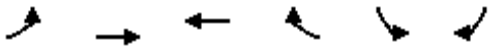
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	6	13	0	5
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	100%	2%	50%	100%	2%	60%
Lane Group Flow (vph)	20	0	29	0	0	8

Intersection Summary	
Area Type:	Other

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	6	13	0	5
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Hourly flow rate (vph)	20	0	9	20	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	27	19			29	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27	19			29	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	787	1059			1584	

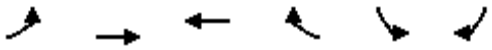
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	29	8
Volume Left	20	0	0
Volume Right	0	20	0
cSH	787	1700	1584
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.6	0.0	0.0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	7	269	546	13	13	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Heavy Vehicles (%)	14%	5%	2%	92%	92%	25%
Lane Group Flow (vph)	0	297	601	0	29	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	269	546	13	13	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	8	289	587	14	22	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	601				898	594
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	601				898	594
tC, single (s)	4.2				7.3	6.5
tC, 2 stage (s)						
tF (s)	2.3				4.3	3.5
p0 queue free %	99				90	99
cM capacity (veh/h)	920				217	465

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	297	601	28
Volume Left	8	0	22
Volume Right	0	14	7
cSH	920	1700	248
Volume to Capacity	0.01	0.35	0.11
Queue Length (m)	0.2	0.0	2.9
Control Delay (s)	0.3	0.0	21.4
Lane LOS	A		C
Approach Delay (s)	0.3	0.0	21.4
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	279	3	6	540	19	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	0%	0%	4%	0%	0%
Lane Group Flow (vph)	291	0	0	563	30	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	279	3	6	540	19	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	288	3	6	557	20	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			291		858	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			291		858	289
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	99
cM capacity (veh/h)			1283		328	755

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	291	563	30
Volume Left	0	6	20
Volume Right	3	0	10
cSH	1700	1283	408
Volume to Capacity	0.17	0.00	0.07
Queue Length (m)	0.0	0.1	1.8
Control Delay (s)	0.0	0.1	14.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	14.5
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	7	13	0	4
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles (%)	100%	2%	2%	100%	2%	0%
Lane Group Flow (vph)	22	0	34	0	0	7

Intersection Summary	
Area Type:	Other

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	7	13	0	4
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	22	0	12	22	0	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	29	22			33	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	29	22			33	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	784	1054			1578	

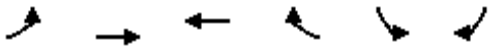
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	33	7
Volume Left	22	0	0
Volume Right	0	22	0
cSH	784	1700	1578
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.6	0.0	0.0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX D

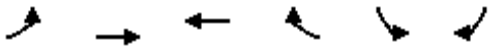
Future (2017) Total Traffic

Level Of Service Calculations



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	7	576	235	13	12	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Heavy Vehicles (%)	43%	4%	7%	100%	100%	71%
Lane Group Flow (vph)	0	670	285	0	29	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	576	235	13	12	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Hourly flow rate (vph)	8	662	270	15	18	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	285				956	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	285				956	278
tC, single (s)	4.5				7.4	6.9
tC, 2 stage (s)						
tF (s)	2.6				4.4	3.9
p0 queue free %	99				90	98
cM capacity (veh/h)	1075				193	622

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	670	285	29
Volume Left	8	0	18
Volume Right	0	15	11
cSH	1075	1700	259
Volume to Capacity	0.01	0.17	0.11
Queue Length (m)	0.2	0.0	2.9
Control Delay (s)	0.2	0.0	20.7
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	20.7
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	571	17	5	243	5	7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	12%	0%	12%	0%	0%
Lane Group Flow (vph)	632	0	0	266	13	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	571	17	5	243	5	7
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	614	18	5	261	5	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			632		895	623
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			632		895	623
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			960		312	490

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	632	267	13
Volume Left	0	5	5
Volume Right	18	0	8
cSH	1700	960	396
Volume to Capacity	0.37	0.01	0.03
Queue Length (m)	0.0	0.1	0.8
Control Delay (s)	0.0	0.2	14.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	14.4
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

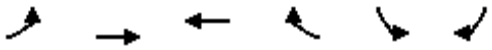
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	7	13	0	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	100%	2%	43%	100%	2%	67%
Lane Group Flow (vph)	20	0	31	0	0	9

Intersection Summary	
Area Type:	Other

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	7	13	0	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Hourly flow rate (vph)	20	0	11	20	0	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	30	21			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30	21			31	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	783	1057			1582	

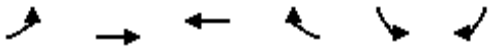
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	31	9
Volume Left	20	0	0
Volume Right	0	20	0
cSH	783	1700	1582
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.6	0.0	0.0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	8	304	617	13	13	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Heavy Vehicles (%)	13%	5%	2%	92%	92%	25%
Lane Group Flow (vph)	0	336	677	0	29	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	304	617	13	13	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	9	327	663	14	22	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	677				1015	670
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677				1015	670
tC, single (s)	4.2				7.3	6.5
tC, 2 stage (s)						
tF (s)	2.3				4.3	3.5
p0 queue free %	99				88	98
cM capacity (veh/h)	865				181	419

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	335	677	28
Volume Left	9	0	22
Volume Right	0	14	7
cSH	865	1700	209
Volume to Capacity	0.01	0.40	0.14
Queue Length (m)	0.2	0.0	3.5
Control Delay (s)	0.3	0.0	24.9
Lane LOS	A		C
Approach Delay (s)	0.3	0.0	24.9
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	314	3	7	609	21	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	0%	0%	4%	0%	0%
Lane Group Flow (vph)	327	0	0	635	33	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	314	3	7	609	21	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	324	3	7	628	22	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			327		968	325
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			327		968	325
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	98
cM capacity (veh/h)			1244		283	721

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	327	635	33
Volume Left	0	7	22
Volume Right	3	0	11
cSH	1700	1244	357
Volume to Capacity	0.19	0.01	0.09
Queue Length (m)	0.0	0.1	2.3
Control Delay (s)	0.0	0.2	16.1
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	16.1
Approach LOS			C

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	8	13	0	4
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles (%)	100%	2%	0%	100%	2%	0%
Lane Group Flow (vph)	22	0	35	0	0	7

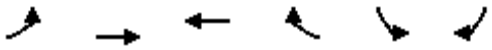
Intersection Summary	
Area Type:	Other

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	8	13	0	4
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	22	0	13	22	0	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	31	24			35	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	31	24			35	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	782	1052			1576	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	35	7
Volume Left	22	0	0
Volume Right	0	22	0
cSH	782	1700	1576
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.6	0.0	0.0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

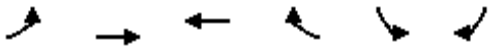
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX E
Future (2022) Total Traffic
Level Of Service Calculations



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	7	653	265	13	12	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Heavy Vehicles (%)	43%	4%	8%	100%	100%	71%
Lane Group Flow (vph)	0	759	320	0	29	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	653	265	13	12	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.65	0.65
Hourly flow rate (vph)	8	751	305	15	18	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	320				1079	312
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320				1079	312
tC, single (s)	4.5				7.4	6.9
tC, 2 stage (s)						
tF (s)	2.6				4.4	3.9
p0 queue free %	99				88	98
cM capacity (veh/h)	1042				159	593

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	759	320	29
Volume Left	8	0	18
Volume Right	0	15	11
cSH	1042	1700	218
Volume to Capacity	0.01	0.19	0.13
Queue Length (m)	0.2	0.0	3.5
Control Delay (s)	0.2	0.0	24.1
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	24.1
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	646	19	5	273	5	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	11%	0%	12%	0%	0%
Lane Group Flow (vph)	715	0	0	299	14	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	646	19	5	273	5	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	695	20	5	294	5	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			715		1009	705
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			715		1009	705
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			895		267	440

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	715	299	14
Volume Left	0	5	5
Volume Right	20	0	9
cSH	1700	895	352
Volume to Capacity	0.42	0.01	0.04
Queue Length (m)	0.0	0.1	0.9
Control Delay (s)	0.0	0.2	15.6
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	15.6
Approach LOS			C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	7	13	0	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Heavy Vehicles (%)	100%	2%	43%	100%	2%	67%
Lane Group Flow (vph)	20	0	31	0	0	9

Intersection Summary	
Area Type:	Other

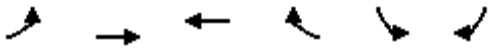
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	7	13	0	6
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Hourly flow rate (vph)	20	0	11	20	0	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	30	21			31	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30	21			31	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	783	1057			1582	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	31	9
Volume Left	20	0	0
Volume Right	0	20	0
cSH	783	1700	1582
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.6	0.0	0.0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24			14	24	14
Link Speed (k/h)		80	80		60	
Link Distance (m)		634.9	88.4		172.0	
Travel Time (s)		28.6	4.0		10.3	
Volume (vph)	9	345	699	13	13	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Heavy Vehicles (%)	11%	5%	2%	92%	92%	20%
Lane Group Flow (vph)	0	381	766	0	30	0

Intersection Summary	
Area Type:	Other



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	345	699	13	13	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	10	371	752	14	22	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	766				1149	759
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	766				1149	759
tC, single (s)	4.2				7.3	6.4
tC, 2 stage (s)						
tF (s)	2.3				4.3	3.5
p0 queue free %	99				85	98
cM capacity (veh/h)	809				147	379

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	381	766	30
Volume Left	10	0	22
Volume Right	0	14	8
cSH	809	1700	177
Volume to Capacity	0.01	0.45	0.17
Queue Length (m)	0.3	0.0	4.5
Control Delay (s)	0.4	0.0	29.5
Lane LOS	A		D
Approach Delay (s)	0.4	0.0	29.5
Approach LOS			D

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)		14	24		24	14
Link Speed (k/h)	80			80	50	
Link Distance (m)	88.4			1062.6	414.3	
Travel Time (s)	4.0			47.8	29.8	
Volume (vph)	354	4	8	688	24	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	0%	0%	4%	0%	0%
Lane Group Flow (vph)	369	0	0	717	38	0

Intersection Summary	
Area Type:	Other

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	354	4	8	688	24	13
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	365	4	8	709	25	13
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			369		1093	367
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			369		1093	367
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		90	98
cM capacity (veh/h)			1201		238	683

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	369	718	38
Volume Left	0	8	25
Volume Right	4	0	13
cSH	1700	1201	308
Volume to Capacity	0.22	0.01	0.12
Queue Length (m)	0.0	0.2	3.2
Control Delay (s)	0.0	0.2	18.3
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	18.3
Approach LOS			C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Turning Speed (k/h)	24	14		14	24	
Link Speed (k/h)	48		60			60
Link Distance (m)	158.8		172.0			924.2
Travel Time (s)	11.9		10.3			55.5
Volume (vph)	13	0	9	13	0	5
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Heavy Vehicles (%)	100%	2%	0%	100%	2%	0%
Lane Group Flow (vph)	22	0	37	0	0	8

Intersection Summary	
Area Type:	Other

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	13	0	9	13	0	5
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	22	0	15	22	0	8
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	34	26			37	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	26			37	
tC, single (s)	7.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	4.4	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	779	1050			1574	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	37	8
Volume Left	22	0	0
Volume Right	0	22	0
cSH	779	1700	1574
Volume to Capacity	0.03	0.02	0.00
Queue Length (m)	0.7	0.0	0.0
Control Delay (s)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX F
Statement Of Limiting Conditions And Assumptions

Statement of Limiting Conditions and Assumptions

1. This Report/Study (the "Work") has been prepared at the request of, and for the exclusive use of, the Owner, and its affiliates (the "Intended Users"). No one other than the Intended Users has the right to use and rely on the Work without first obtaining the written authorization of Cole Engineering Group Ltd. (Cole Engineering) and its Owner.

2. Cole Engineering expressly excludes liability to any party except the Intended Users for any use of, and/or reliance upon, the Work.

3. Cole Engineering notes that the following assumptions were made in completing the Work:

   a) the land use description(s) supplied to us are correct;
   b) the surveys and data supplied to Cole Engineering by the Owner are accurate;
   c) market timing, approval delivery and secondary source information is within the control of Parties other than Cole Engineering; and
   d) there are no encroachments, leases, covenants, binding agreements, restrictions, pledges, charges, liens or special assessments outstanding, or encumbrances which would significantly affect the use or servicing.

   Investigations have not been carried out to verify these assumptions. Cole Engineering deems the sources of data and statistical information contained herein to be reliable, but we extend no guarantee of accuracy in these respects.

4. Cole Engineering accepts no responsibility for legal interpretations, questions of survey, opinion of title, hidden or inconspicuous conditions of the property, toxic wastes or contaminated materials, soil or sub-soil conditions, environmental, engineering or other factual and technical matters disclosed by the Owner, the Client, or any public agency, which by their nature, may change the outcome of the Work. Such factors, beyond the scope of this Work, could affect the findings, conclusions and opinions rendered in the Work. We have made disclosure of related potential problems that have come to our attention. Responsibility for diligence with respect to all matters of fact reported herein rests with the Intended Users.

5. Cole Engineering practices engineering in the general areas of infrastructure and transportation. It is not qualified to and is not providing legal or planning advice in this Work.

6. The legal description of the property and the area of the site were based upon surveys and data supplied to us by the Owner. The plans, photographs, and sketches contained in this report are included solely to aide in visualizing the location of the property, the configuration and boundaries of the site, and the relative position of the improvements on the said lands.

7. We have made investigations from secondary sources as documented in the Work, but we have not checked for compliance with by-laws, codes, agency and governmental regulations, etc., unless specifically noted in the Work.

8. Because conditions, including capacity, allocation, economic, social, and political factors change rapidly and, on occasion, without notice or warning, the findings of the Work expressed herein, are as of the date of the Work and cannot necessarily be relied upon as of any other date without subsequent advice from Cole Engineering.

9. The value of proposed improvements should be applied only with regard to the purpose and function of the Work, as outlined in the body of this Work. Any cost estimates set out in the Work are based on construction averages and subject to change.

10. Neither possession of the Work, nor a copy of it, carries the right of publication. All copyright in the Work is reserved to Cole Engineering. The Work shall not be disclosed, produced or reproduced, quoted from, or referred to, in whole or in part, or published in any manner, without the express written consent of Cole Engineering and the Owner.

11. The Work is only valid if it bears the professional engineer's seal and original signature of the author, and if considered in its entirety. Responsibility for unauthorized alteration to the Work is denied.