

B1. Traffic Report

Region of Peel

Dixie Road Class EA Study Traffic Report

Prepared by:

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Project Number:

60118562

Date:

November, 2010 (Revised August 2011)

August 19, 2011

Hitesh Topiwala, MCIP, RPP
Project Manager, Transportation Program Planning
Transportation Division, Public Works
Region of Peel
9445 Airport Road
Brampton ON L6S 4J3

Dear Mr. Topiwala:

Project No: 60118562

Regarding: **Dixie Road Class EA Study, Final Traffic Report**

Enclosed please find the Final Traffic Report for the Dixie Road Class EA project.

If you have any questions regarding the information provided herein, please do not hesitate to contact me at 905-668-4021 ext. 2251.

Sincerely,
AECOM Canada Ltd.



Brenda Jamieson, P. Eng.
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Encl. Traffic Report

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1. Introduction

The Region of Peel has initiated a Class Environmental Assessment (EA) for improvements to Dixie Road from Queen Street East northerly to 2 kilometres north of Mayfield Road. In order to best address operational deficiencies and the need for additional north-south capacity in the area, a number of alternatives solutions have been examined as part of the study including the potential widening of Dixie Road to six lanes, cross-sectional elements, intersection improvements, traffic operations, and the overall impacts of such improvements on the social, cultural and natural environments.

A recent City of Brampton's updated *Transportation and Transit Master Plan (TTMP)* has also confirmed the Dixie Road widening requirements from the City of Brampton's southern limit to Mayfield Road.

This report describes the following tasks that were undertaken as part of this study, including:

- Assessment of existing traffic conditions;
- Review of future study area developments;
- Traffic growth projections;
- Assessment of future traffic conditions;
- Future turning movement count projections for the horizon years of 2021 and 2031;
- Left turn lane and traffic signal warrant analyses of the study area unsignalized intersection; and
- Estimation of intersection turning lane storage lengths for the 2021 and 2031 horizon years.

1.1 Study Area

Dixie Road (Regional Road 4) is under the jurisdiction of the Region of Peel. The Region of Peel Official Plan classifies Dixie Road as a Major Arterial Road from the Queen Elizabeth Way (QEW) in the City of Mississauga to Olde Base Line Road in the Town of Caledon. The basic number of through lanes on Dixie Road varies within the study area:

- Six lanes to the north and south of Queen Street East;
- Four lanes between Hillside Drive and south of Countryside Drive; and
- Two lanes between north of Countryside Drive and 2 kilometres north of Mayfield Road.

Access to adjacent land uses is generally restricted to both signalized and unsignalized intersections. Auxiliary lanes are provided at the intersections to accommodate turning movements. The posted speed limit on Dixie Road varies from 60 km/h (south) to 80 km/h (north) of the study area limits. The study area is shown in **Figure 1**.

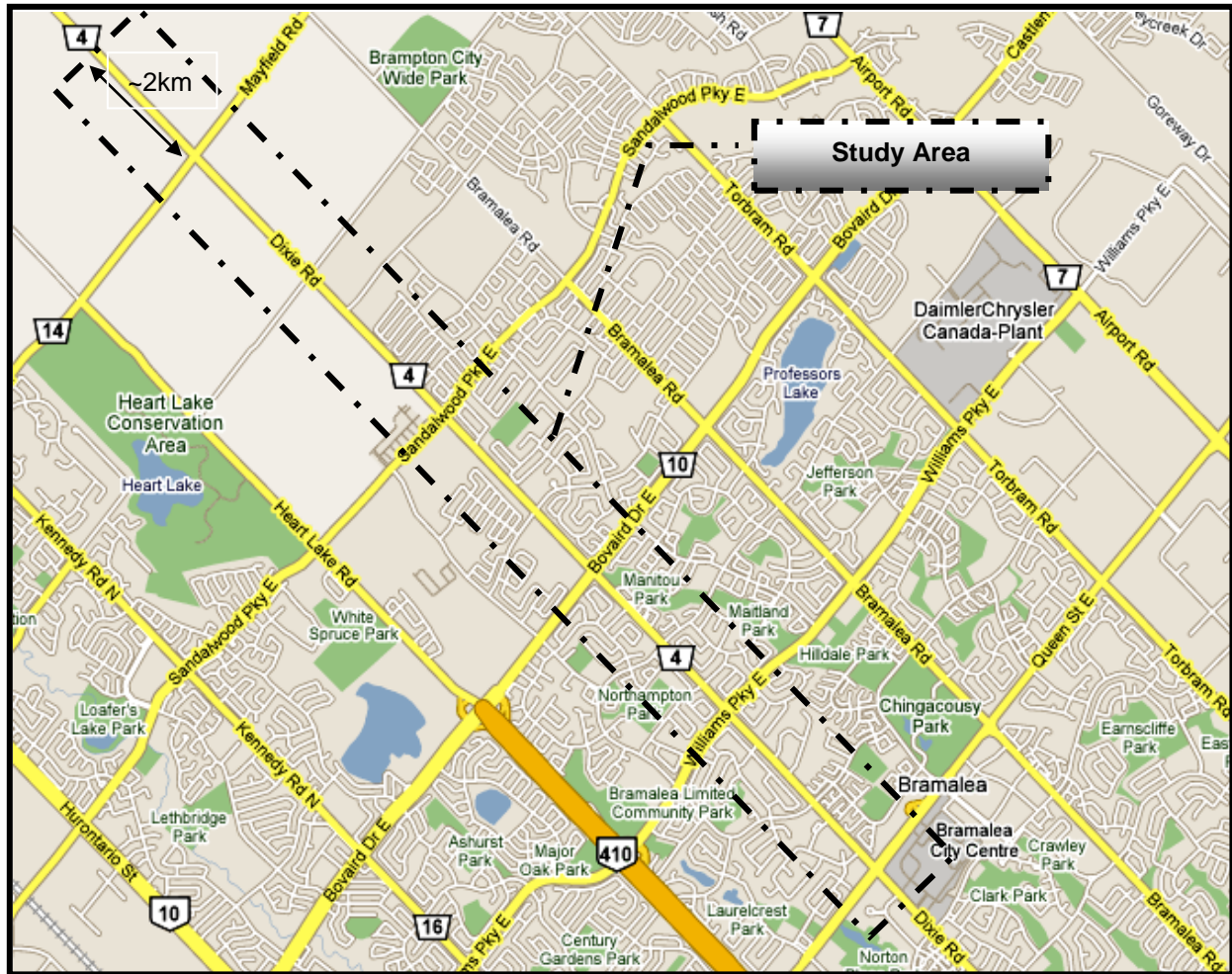
1.2 Study Area Intersections

The study area consists of 17 intersections in total comprising 13 signalized and 4 unsignalized. A list of existing intersections with the type of control is provided in **Table 1**.

Table 1 ~ List of Study Area Intersections

No.	Name of Intersection	Type of Control
1	Dixie Road at Mayfield Road	Signalized
2	Dixie Road at Countryside Drive	Signalized
3	Dixie Road at Father Tobin Road	Signalized
4	Dixie Road at Octillo Boulevard	Signalized
5	Dixie Road at Sandalwood Pkwy	Signalized
6	Dixie Road at Springtown Trail	Signalized
7	Dixie Road at Peter Robertson Boulevard	Signalized
8	Dixie Road at Bovaird Drive East	Signalized
9	Dixie Road at Northcliffe Street/ Moregate Crescent	Unsignalized
10	Dixie Road at North Park Drive	Signalized
11	Dixie Road at Northampton Street/ Mansion Street	Signalized
12	Dixie Road at Williams Pkwy	Signalized
13	Dixie Road at Lascelles Boulevard	Unsignalized
14	Dixie Road at Howden Boulevard	Signalized
15	Dixie Road at Hazelwood Drive	Unsignalized
16	Dixie Road at Hillside Drive	Unsignalized
17	Dixie Road at Queen Street East	Signalized

Figure 1 ~ Study Area



2. Existing Conditions

This section presents an overview of the existing conditions in the study area such as existing traffic volumes, pedestrian volumes, truck volumes, lane configurations, mid-block volume to capacity ratios and traffic operation assessment.

2.1 Existing Traffic Volumes

The existing turning movement counts (TMC) for the weekday AM and PM peak hours in 2007 were provided by the Region of Peel for the study area intersections. The existing turning movement counts were factored to develop average day and month counts using the Ministry of Transportation (MTO) guidelines. It must be noted that it was necessary to use the factors since the TMC provided were collected at the different times. The existing turning movement counts were also approximately balanced between intersections based upon the available access points. The factored existing turning movement counts are shown in **Figure 2** (2 pages). Detailed existing turning movement count sheets and the MTO figure which demonstrates the variation of average daily traffic by month are provided in **Appendix A**.

2.2 Existing Pedestrians Volumes

Dixie Road accommodates pedestrians through sidewalk between Father Tobin Road and Queen Street East throughout the corridor on east side of the roadway, while sidewalk on the west side of the roadway is discontinued in some sections. The existing pedestrian volumes are shown in **Table 2**.

Table 2 ~ Existing Pedestrians Volumes

No.	Name of Intersection	AM and PM Peak Pedestrians Crossing Roadways			
		East	West	North	South
1	Dixie Road at Mayfield Road	3 (1)	0 (0)	0 (0)	0 (0)
2	Dixie Road at Countryside Drive	0 (0)	0 (0)	0 (0)	0 (0)
3	Dixie Road at Father Tobin Road	1 (1)	1 (1)	1 (1)	1 (1)
4	Dixie Road at Octillo Boulevard	61 (27)	0 (0)	0 (23)	1 (4)
5	Dixie Road at Sandalwood Pkwy	50 (14)	28 (5)	45 (5)	63 (11)
6	Dixie Road at Springtown Trail	0 (0)	0 (0)	0 (0)	13 (15)
7	Dixie Road at Peter Robertson Boulevard	0 (0)	0 (0)	38 (44)	0 (0)
8	Dixie Road at Bovaird Drive East	4 (1)	2 (1)	3 (1)	10 (3)
9	Dixie Road at Northcliffe Street/ Moregate Crescent	6 (1)	4 (0)	2 (0)	0 (1)
10	Dixie Road at North Park Drive	0 (0)	0 (0)	0 (0)	19 (14)
11	Dixie Road at Northampton Street/ Mansion Street	6 (2)	5 (2)	17 (18)	4 (5)
12	Dixie Road at Williams Pkwy	2 (4)	1 (2)	16 (0)	12 (2)
13	Dixie Road at Lascelles Boulevard	0 (0)	4 (4)	0 (0)	0 (0)
14	Dixie Road at Howden Boulevard	3 (5)	1 (5)	0 (13)	0 (17)
15	Dixie Road at Hazelwood Drive	0 (0)	5 (5)	0 (0)	0 (0)
16	Dixie Road at Hillside Drive	0 (0)	5 (2)	0 (0)	0 (2)
17	Dixie Road at Queen Street East	3 (12)	3 (0)	1 (5)	3 (2)

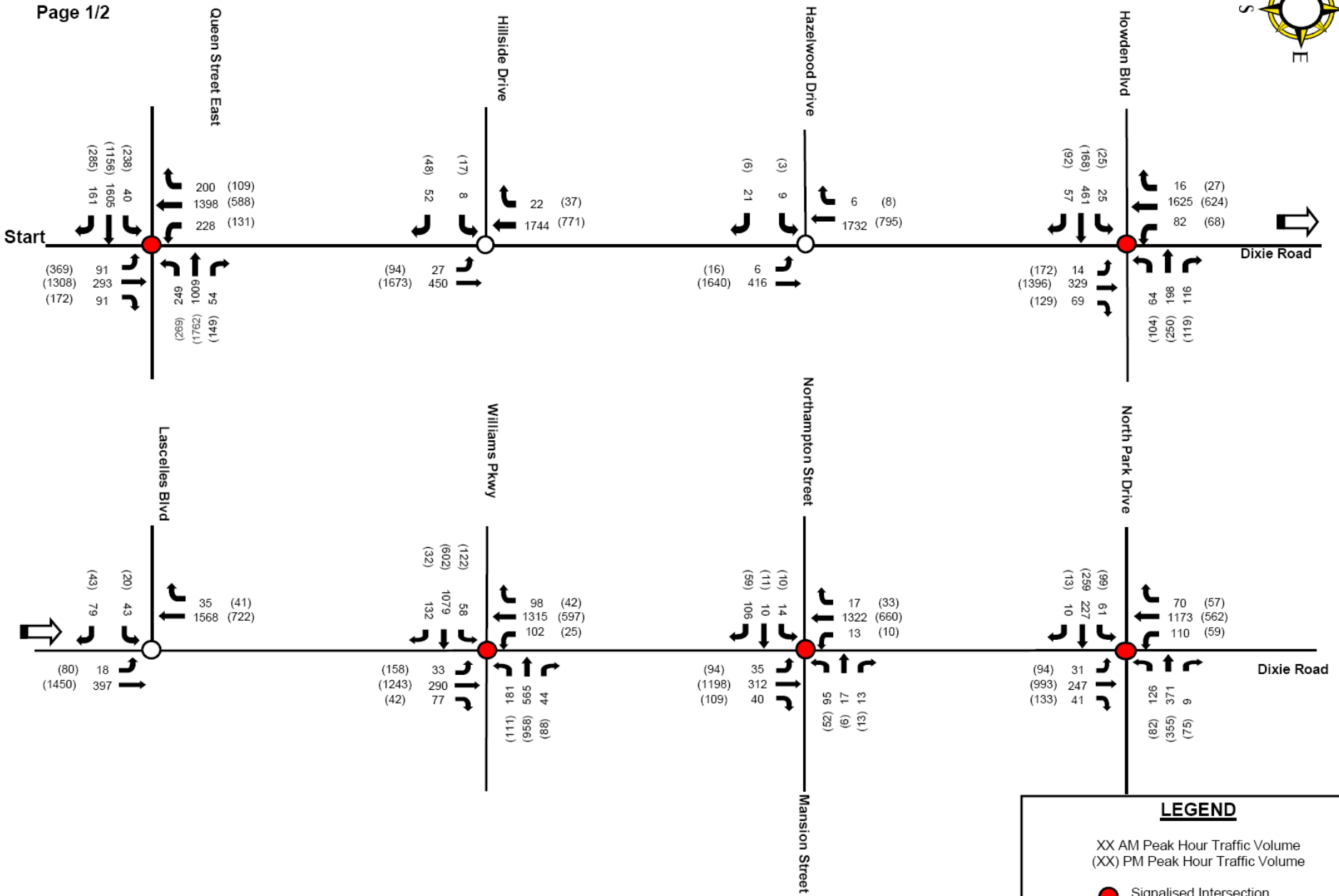
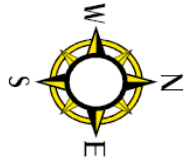
xx(xx) AM and PM peak Hour pedestrians volumes

2.3 Truck Volumes

Heavy vehicle traffic on Dixie road is limited given truck routing restrictions, however truck delivering from Orenda Road west to Mayfield Road is only restricted in between 11p.m. to 6:30a.m. Truck volumes (light, medium and heavy) on Dixie Road represent approximately 2-6% percent of southbound or northbound traffic during both AM and PM Peak periods. Section between North Park Drive and Northampton Street carried higher truck percentage at approximately 11% during AM peak hour.

Figure 2 ~ Existing Traffic Volumes

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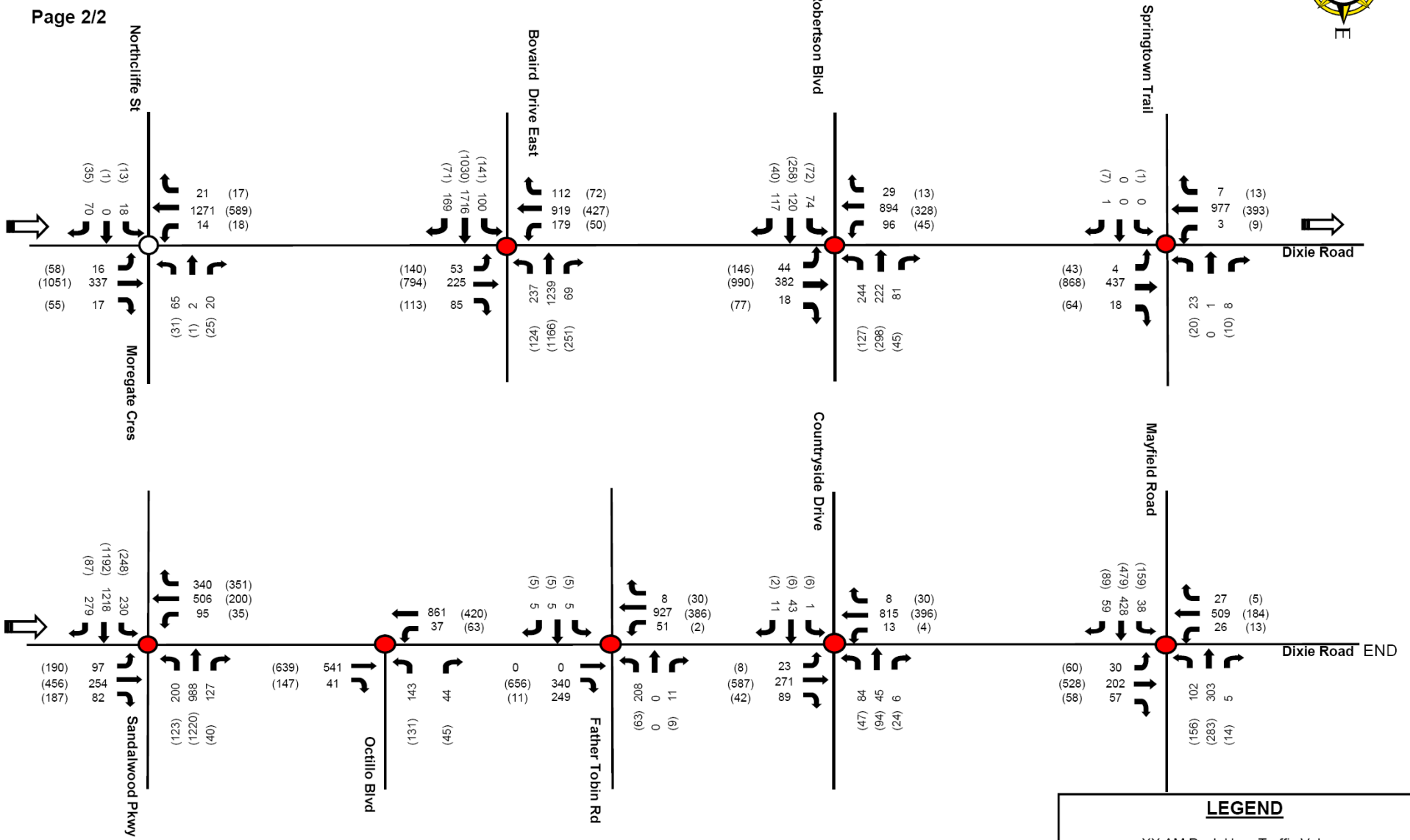
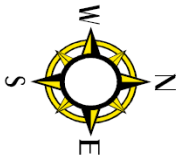
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- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Unsignalled Intersection



Not to Scale

Figure 2 ~ Existing Traffic Volumes



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- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Unsignalled Intersection



Not to Scale

2.4 Existing Intersection Operations

The traffic operations of all the study area intersections were analyzed using the Synchro 7.0 software package which is based on the Highway Capacity Manual (HCM) methodologies. This analysis provides a detailed assessment of the existing traffic operations in the study area, including levels of service, delays and volume to capacity ratios for each intersection approach and movement. The amount of delay is further described in terms of level of service ranging from A to F. The level of service (LOS) definitions for signalized and unsignalized intersections, are provided in **Appendix B**.

The “critical movements” identified in the capacity analyses and presented in the summary tables in this report are those having level of service (LOS) of “E” or worse and/or a volume to capacity ratio (V/C) of 0.90 or greater for signalized intersections. Since the analysis is based on actual volumes, V/C > 1.00 indicates that the counted volumes exceeded the available capacity calculated by the analysis procedure/software. Individual movements at intersections with calculated V/C > 1.00 are operating essentially over capacity and can be expected to experience severe recurring queuing and congestion during peak periods.

The existing intersection lane configurations are shown in **Figure 3**. The existing traffic operations were conducted using existing, traffic volumes (**Figure 2**), lane configurations and signal timings provided by the Region of Peel. The capacity analysis results for the signalized and unsignalized intersections are summarized in **Table 3**. Detailed Synchro output sheets are provided in **Appendix C**.

Table 3 ~ Summary of Existing Intersections Operations

Intersections	Overall/ Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Signalized							
Dixie Road at Mayfield Road	Overall	B	19	0.48	C	22	0.54
Dixie Road at Countryside Drive	Overall	C	28	0.55	B	13	0.47
Dixie Road at Father Tobin Road	Overall	B	12	0.55	A	6	0.33
Dixie Road at Octillo Boulevard	Overall	A	10	0.44	A	9	0.38
Dixie Road at Sandalwood Pkwy	Overall	C	30	0.65	C	29	0.58
Dixie Road at Springtown Trail	Overall	A	4	0.34	A	4	0.29
Dixie Road at Peter Robertson Boulevard	Overall	B	20	0.54	B	18	0.46
Dixie Road at Bovaird Drive East	Overall	D	39	0.84	C	28	0.60
	WBL	E	73	0.93	--	--	--
	SBT	E	55	0.92	--	--	--
Dixie Road at North Park Drive	Overall	C	20	0.53	B	19	0.45
Dixie Road at Northampton Street	Overall	B	16	0.53	B	12	0.42

Intersections	Overall/ Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Signalized							
Dixie Road at Williams Pkwy	Overall	D	39	0.90	C	32	0.80
	EBT	D	45	0.90	--	--	--
	WBL	E	56	0.84	--	--	--
	NBL	E	59	0.55	--	--	--
	SBT	D	44	0.91	--	--	--
Dixie Road at Howden Boulevard	Overall	C	22	0.68	B	20	0.59
Dixie Road at Queen Street East	Overall	D	49	0.91	D	52	0.94
	EBL	---	---	---	E	79	0.96
	EBT	E	58	0.98	---	---	---
	WBL	E	73	0.94	E	60	0.89
	NBL	E	58	0.46	E	61	0.79
	NBT	---	---	---	E	61	0.97
	SBL	---	---	---	E	65	0.66
	SBT	E	59	0.97	---	---	---
Unsignalized							
Dixie Road at Northcliffe Street	Average Delay	--	2	--	--	2	--
Dixie Road at Lascelles Street	Average Delay	--	1	--	--	1	--
Hazelwood Drive	Average Delay	--	1	--	--	1	--
Dixie Road at Hillside Drive	Average Delay	--	1	--	--	1	--

EBL= eastbound left, NBT= northbound through, WBL-T-R= westbound shared left-through-right, EBL-R, eastbound shared left-right

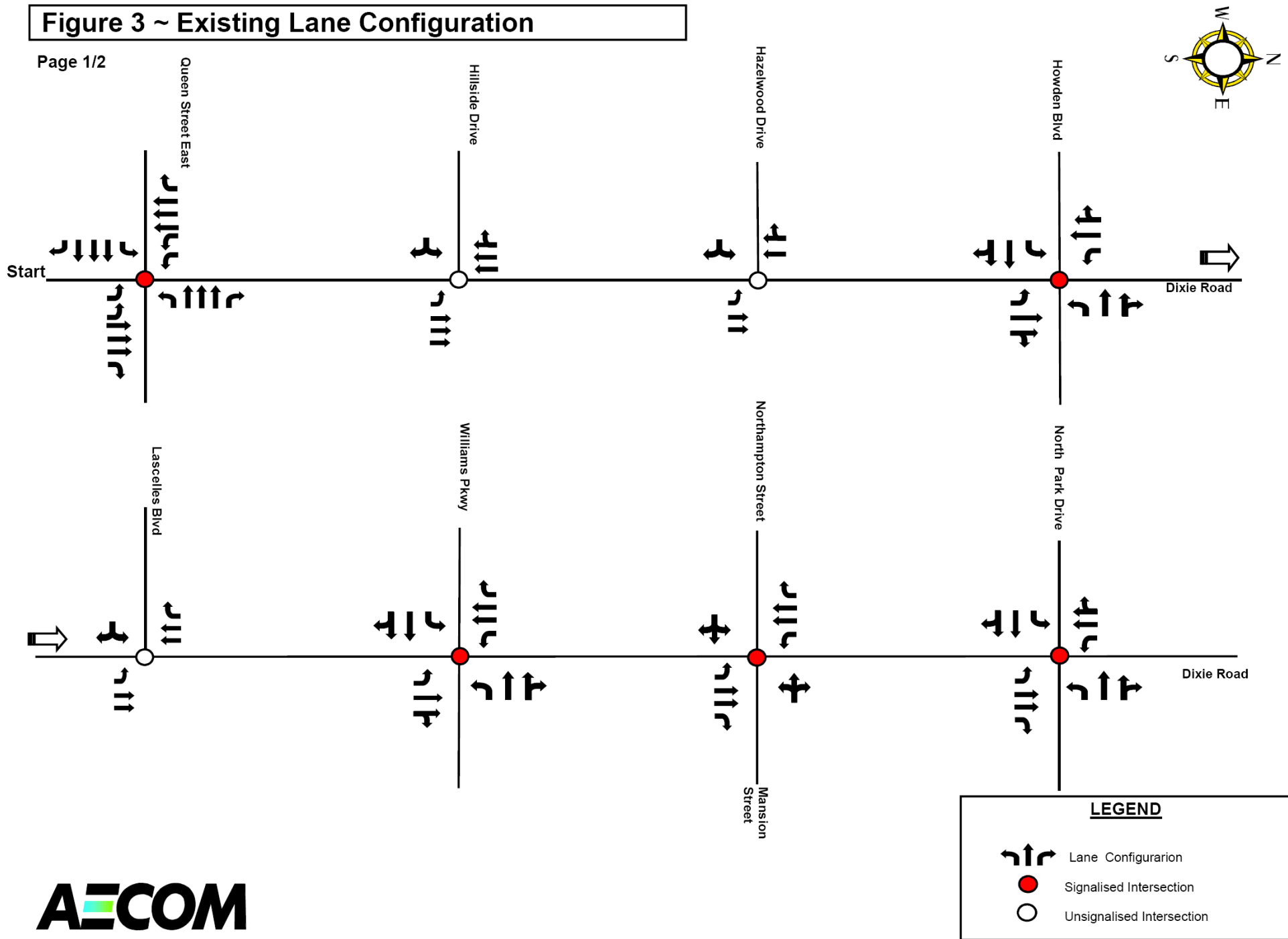
Table 2 indicates that all signalized intersections in the study area are operating at overall LOS of “D” or better with the volume to capacity ratio of 0.94 or lower in both the AM and PM peak hours.

With respect to individual movements, some movements of the Dixie Road intersections with Bovaird Drive East, Williams Pkwy and Queen Street East have shown level of service “E” and also are approaching to capacity.

All study area unsignalized intersections are operating at the average delay of less than 2 seconds.

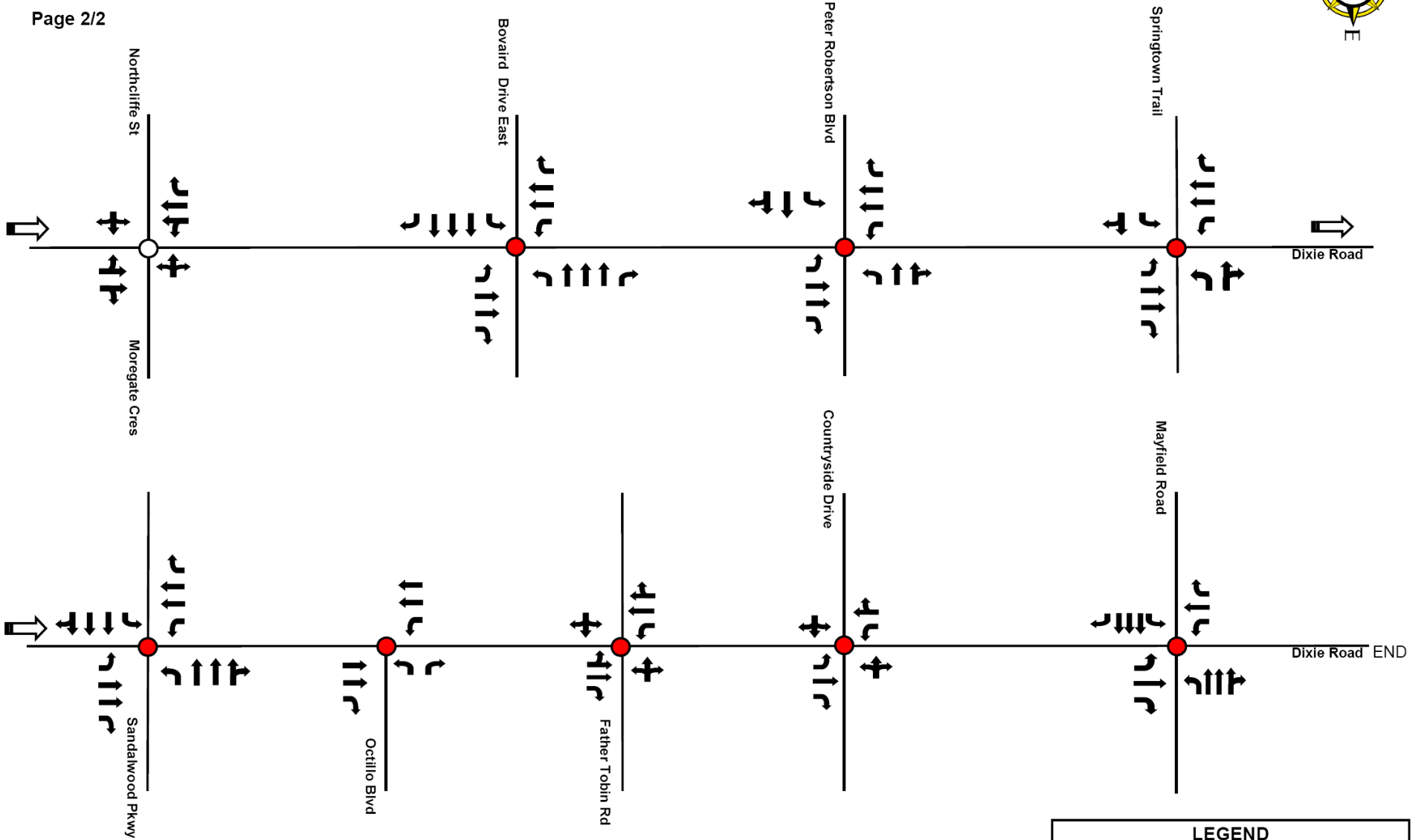
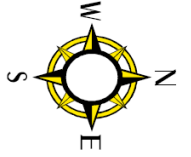
Figure 3 ~ Existing Lane Configuration

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Figure 3 ~ Existing Lane Configuration



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- Lane Configuration
- Signalised Intersection
- Unsignalised Intersection



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2.5 Existing Mid-Block Link Volume to Capacity Assessment

The ratio of travel demand to available travel supply is commonly known as volume to capacity ratio (V/C). A higher V/C value at any roadway section means more congestion. To avoid severe congestion and its related environmental, safety, and economic impacts, roadway capacity and operational improvements should generally be considered when the ratio of link volume to planning level capacity (V/C) exceeds 0.85. This mid-block volume to capacity ratio can also be described in terms of level of service definitions with respect to operation conditions which are shown in **Table 4**.

Table 4 ~ Mid-block Volume to Capacity Ratio Definitions

Volume to Capacity Ratio	Level of Service	Operating Conditions
≤ 0.85	LOS A-C	Free flow; very little or no delay
> 0.85 and < 1.00	LOS D-E	Approaching or at capacity; moderate delays and queuing
≥ 1.00	LOS F	Over capacity: significant delay and queuing

An initial assessment of the potential need for capacity improvements in the study area was completed comparing link volumes derived from the existing factored turning movement counts for the weekday AM and PM peak hours to a planning level capacity of 900 vehicles per hour per lane. The existing mid-block link volumes are shown in **Figure 4**. From the existing mid-block link volume patterns it was found that southbound volumes in the AM peak hour and northbound volumes in the PM peak hour are critical and were utilized in the V/C assessments. The critical link volumes between intersections were used for the V/C assessments and results are summarized in **Table 5**.

Table 5 ~ Mid-block Link Volume* to Capacity Ratio Assessment

Roadway Locations along Dixie Road	Southbound, AM Peak Hour			Northbound, PM Peak Hour		
	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C
North of Mayfield Road	561	900	0.62	701	900	0.78
Between Mayfield Road and Countryside Drive	837	900	0.93	645	900	0.72
Between Countryside Drive and Father Tobin Road	979	1800	0.54	664	1800	0.37
Between Father Tobin Road and Octillo Boulevard	1135	1800	0.63	684	1800	0.38
Between Octillo Boulevard and Sandalwood Pkwy	1003	1800	0.56	786	1800	0.44
Between Sandalwood Pkwy and Springtown Trail	988	1800	0.55	880	1800	0.49
Between Springtown Trail and Peter Robertson Boulevard	1019	1800	0.57	1107	1800	0.62
Between Peter Robertson Boulevard and Bovaird Drive East	1255	1800	0.70	1213	1800	0.67
Between Bovaird Drive East and Northcliff St.-Moregate Crescent	1325	1800	0.74	1089	1800	0.61
Between Northcliff St.-Moregate Crescent and North Park Drive	1406	1800	0.78	1167	1800	0.65
Between North Park Drive and Northampton Street	1351	1800	0.75	1220	1800	0.68
Between Northampton Street and Williams Pkwy	1523	1800	0.85	1452	1800	0.81
Between Williams Pkwy and Lascelles Boulevard	1628	1800	0.90	1470	1800	0.82
Between Lascelles Boulevard and Howden Boulevard	1724	1800	0.96	1541	1800	0.86
Between Howden Boulevard and Hazelwood Drive	1746	1800	0.97	1697	1800	0.94
Between Hazelwood Drive and Hillside Drive	1766	1800	0.98	1690	1800	0.94
Between Hillside Drive and Queen Street East	1825	2700	0.68	1767	2700	0.65
South of Queen Street East	1808	2700	0.67	1849	2700	0.68

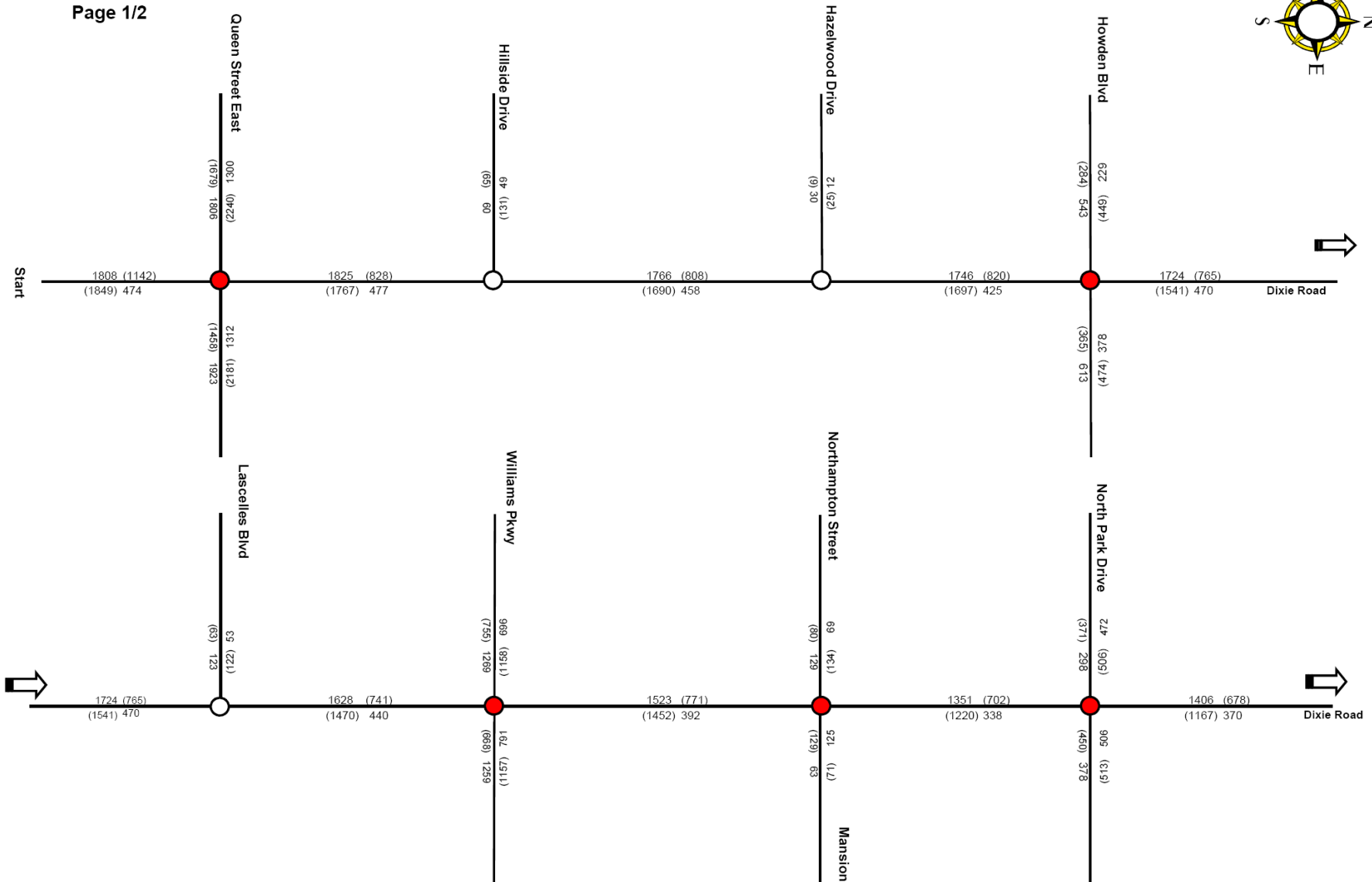
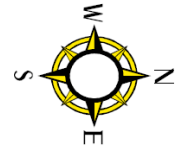
*Critical link volumes between intersections

Table 5 indicates that a section of Dixie Road between south of Williams Pkwy and south of Hazelwood Drive is approaching to capacity in the AM Peak hour. In the PM peak hour, Dixie Road is approaching to capacity between north of Howden Boulevard and north of Hillside Drive. The remaining sections in the study area along Dixie Road are operating below capacity in both, the AM and PM peak hours and there is sufficient residual capacity.

Figure 4 ~ Existing Mid-Block Link Volumes

Note: Critical link volumes between intersections

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XX AM Peak Hour Traffic Volume
 (XX) PM Peak Hour Traffic Volume

- Signalised Intersection
- Unsignalised Intersection

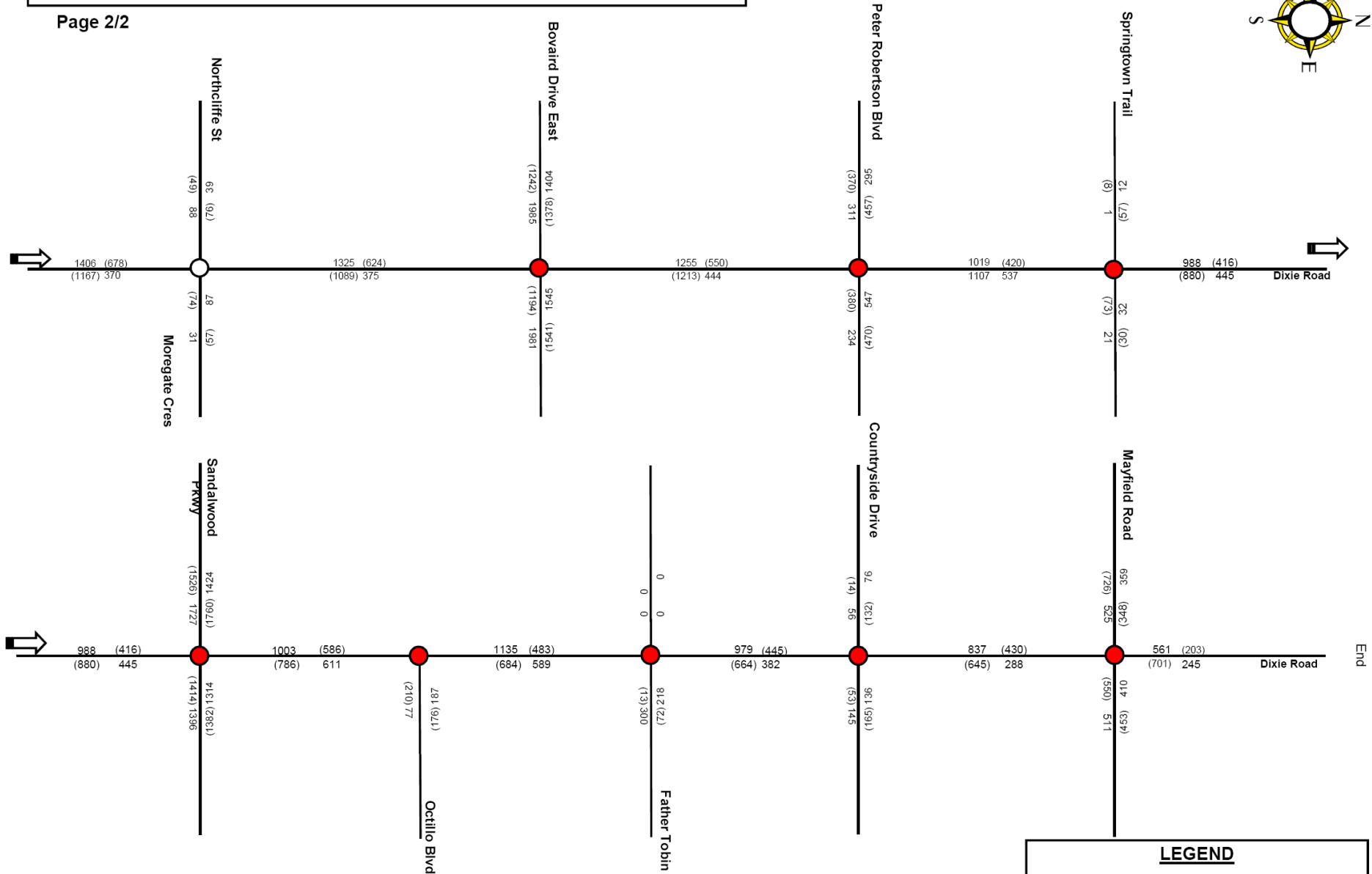
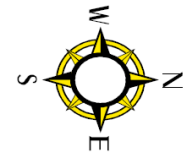


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Figure 4 ~ Existing Mid-Block Link Volumes

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Note: Critical link volumes between intersections



LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Unsignalled Intersection



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3. Future Study Area Developments

The Region of Peel requested AECOM to review the anticipated future background developments north and south of Mayfield Road in order to assess the Dixie Road potential needs at the northern limits of the study area. The following reports were reviewed in this context:

- Secondary Plan Area 48 (Countryside Villages) Transportation Study Background Report dated: February 2008 prepared by iTRANS Consulting Inc.
- Mayfield West Industrial Lands Transportation Impact Assessment, Town of Caledon, Region of Peel prepared by IBI GROUP dated: February 2008; and
- Transportation and Transit Master Plan Sustainable, Update Final Report Draft #2, City of Brampton dated: June 2009.

Countryside Villages Secondary Plan:

The Countryside Villages Secondary Plan will consist of 1,600 acres, bounded by Mayfield Road to the north, Countryside Drive to the south, Heart Lake Road to the west and the west branch of the West Humber River to the east. The Countryside Villages Secondary Plan is proposing 18,400 residents and 8,500 employments with accesses to Mayfield Road and Dixie Road. An east-west Main Street through the centre of community is also being proposed to be connected to Dixie Road at west end.

This transportation study has analysed ultimate traffic conditions for the horizon year of 2031. In this study traffic forecasts were derived from the trip rates from the City of Brampton's Emme/2 model and were applied to land uses forecasts for the Countryside Villages. In this report screenline and link analysis through volume to capacity ratios were presented for the PM peak hour for 2031 horizon year.

Only two intersections, Dixie Road/Countryside Drive and Dixie Road/Mayfield Road are identical in this study and Dixie Road EA in hand. In the Dixie Road EA traffic analysis, east-west and north-south volumes entering and leaving immediate to both the above mentioned intersections were utilized from this report.

Mayfield West Industrial Lands Transportation Impact Assessment:

This transportation impact assessment (TIA) was prepared for a proposed land use Industrial Park to be located to the north of Mayfield Road between Heart Lake Road and Dixie Road. This traffic assessment report presented different types of land uses for trip generation purposes including Industrial Park and Truck Terminal for the lands of approximately 354 acres. Different trip generation scenarios consisting of 750, 1500, 2000 trips per peak hours were used in the traffic operational analysis for horizon years of 2011 and 2021. Since definitive land uses were not known at the time of this study but it was indicated that development potential in the area is likely to consist of wholly or as a combination of:

- General Light Industrial Park;
- Distribution Centre or Trucking/Logistics Facilities; and/or
- Warehousing Facilities.

This report assumed that Mayfield Road will be widened to six lanes from Heart Lake Road to Dixie Road by 2009 year. Only the Dixie Road/Mayfield Road intersection is identical in this report and Dixie Road EA. In order to be conservative, site traffic generated from the upper limit of the trip generation scenario of 2000 trips and assigned to this intersection was extracted and included in the Dixie Road EA in both the 2021 and 2031 horizon years.

Transportation and Transit Master Plan, City of Brampton, Updated June 2009:

A recent update to the City of Brampton's Transportation and Transit Master Plan (TTMP) dated: June 2009 has identified the widening of Dixie Road from 4-lane to 6-lane cross-section from city's southern limit to Countryside Drive by the year 2016. This report also recommended widening of Dixie Road from 2-lane to 4-lane cross-section from Countryside Drive to Mayfield Road by the same year. The updated TTMP report has indicated that the above recommendations would be valid beyond the year 2031.

The updated TTMP has calculated maximum load of 2854 transit riders in PM period with the BRT Corridor option on Dixie Road. This report has also identified Dixie Road as Secondary Transit Corridor (10-15 minutes frequencies) by 2011 year, Primary Transit Corridor (5-10 minutes frequencies) by 2016 year and potential BRT Corridor (headway less than 5 minutes) by 2016 year between Steeles Avenue and Bovaird Drive East until 2031 year. As mentioned in this report that Primary Transit and BRT Corridors will incorporate transit priority measures including transit priority signal, bus bays, high occupancy lanes (HOV), queue jump lanes, etc.

The illustrations from the recently updated TTMP indicating the future area road network improvement recommendations and future transit network are provided in **Appendix D**.

4. Future Traffic Conditions

4.1 Future Traffic Growth Factors

The annual traffic growth rates for the different sections of Dixie Road (north-south) and east-west Regional crossing roads were provided by the Region of Peel as shown in **Table 6** and **Table 7**, respectively.

Table 6 ~ Growth Rate Factors along Dixie Road

Future Years	Compounded Annual Growth rates on Dixie Road between Queen Street East and Bovaird Drive East	Compounded Annual Growth rates on Dixie Road between Bovaird Drive East and Mayfield Road
0 - 5 Years	3%	5%
6 - 10 Years	3%	4%
11 - 20 Years	1%	2%
21 or more Years	1%	1%

Table 7 ~ Growth Rate Factors on Regional Crossing Roads near Dixie Road

Future Years	Compounded Annual Growth rates on Queen Street East	Compounded Annual Growth rates on Bovaird Drive East	Compounded Annual Growth rates on Mayfield Road
0 - 5 Years	4%	5%	4%
6 - 10 Years	3%	4%	3%
11 - 20 Years	1%	2%	2%
21 or more Years	1%	1%	2%

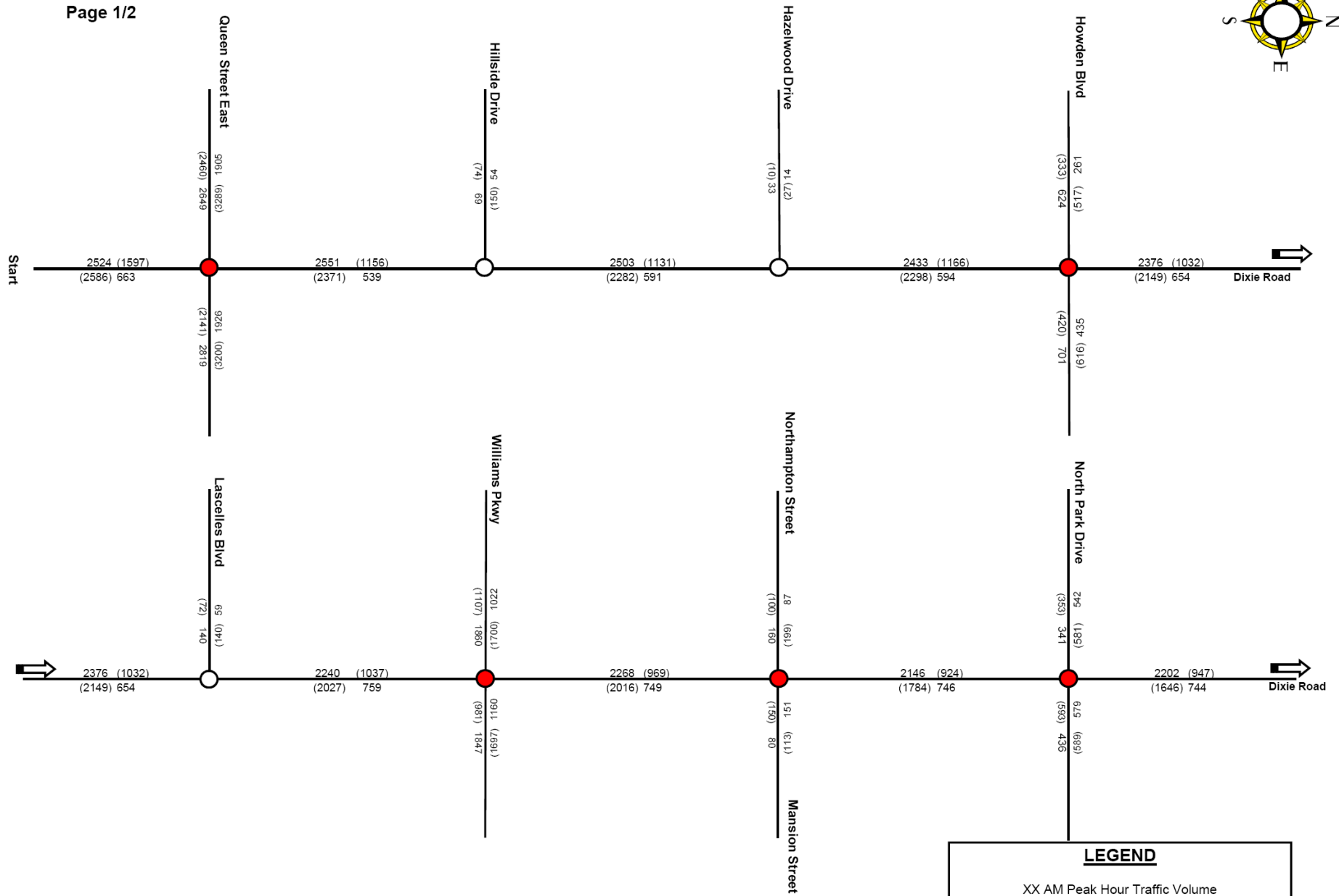
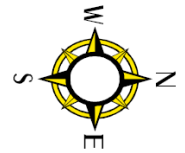
The growth rate factors for the minor crossing roads at Dixie Road were assumed to be one percent compounded annually except Countryside Drive and Mayfield Road intersections where actual volumes from the Secondary Plan Area 48 (Countryside Villages), Transportation Study Background Report were utilized for the 2031 horizon year. For the 2021 horizon year, link volumes were interpolated between existing and 2031 horizon year.

4.2 Future Mid-Block Link Volumes

The traffic growth rate factors presented in **Tables 6 and 7** were applied (compounded annually) to the existing mid-block link volumes to develop 2021 and -2031 mid-block link volumes as shown in **Figure 5** (2 pages) and **Figure 6** (2 pages), respectively. As explained in the previous section, the east-west and north-south link volumes immediate to the intersections of Dixie Road with Mayfield Road and Countryside Drive were taken from the *Mayfield West Industrial Lands* and *Countryside Villages Secondary Plan* transportation study reports.

Figure 5 ~ 2021 Future Mid-Block Link Volumes

Note: Critical link volumes between intersections



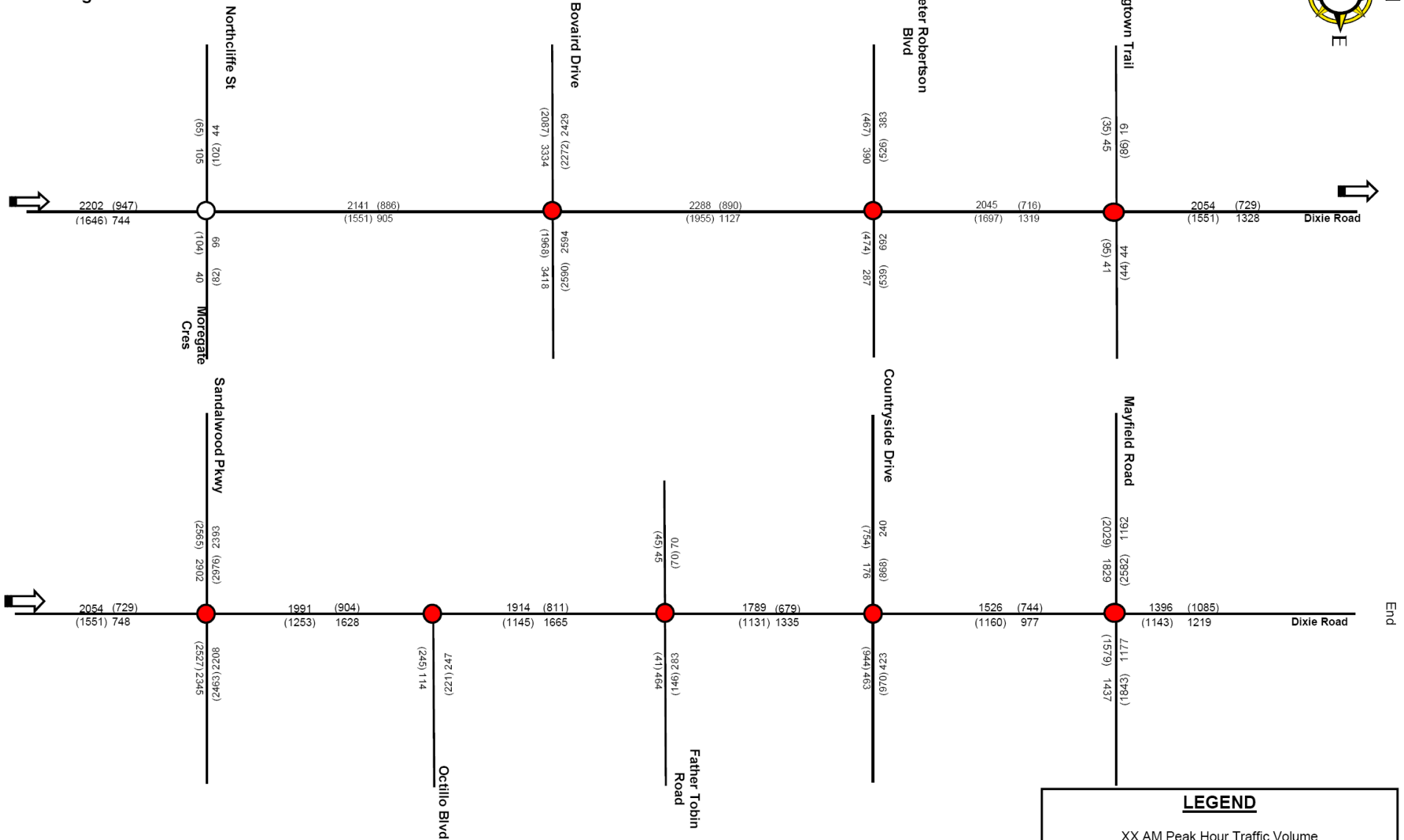
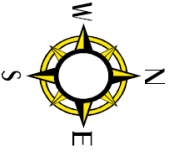
Not to Scale

LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalised Intersection
- Unsignalised Intersection

Figure 5~ 2021 Future Mid-Block Link Volumes

Note: Critical link volumes between intersections



LEGEND

XX AM Peak Hour Traffic Volume
 (XX) PM Peak Hour Traffic Volume

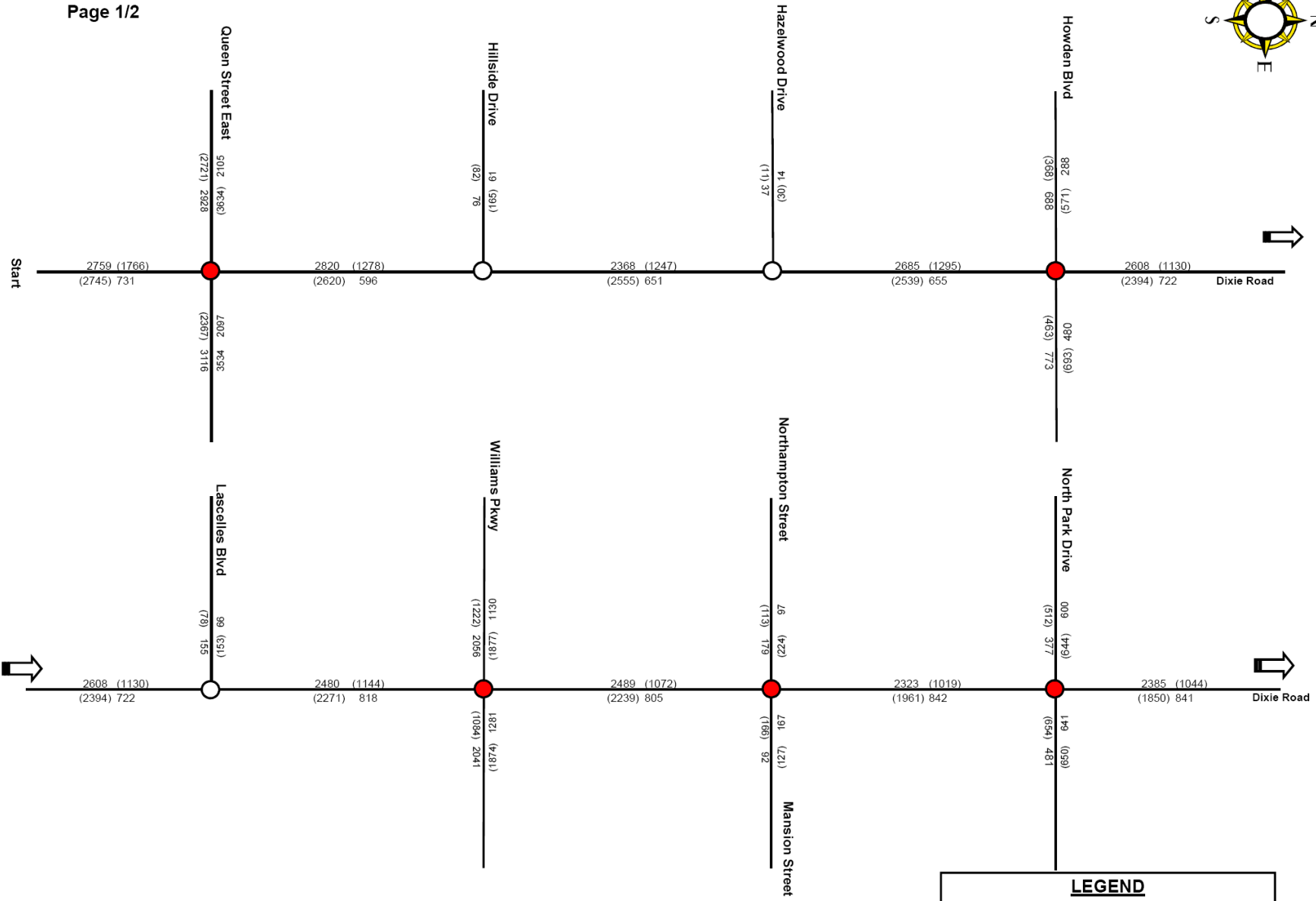
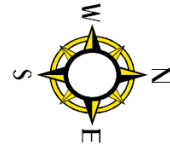
● Signalised Intersection
 ○ Unsignalised Intersection



Not to Scale

Figure 6 ~ 2031 Future Mid-Block Volumes

Note: Critical link volumes between intersections



LEGEND

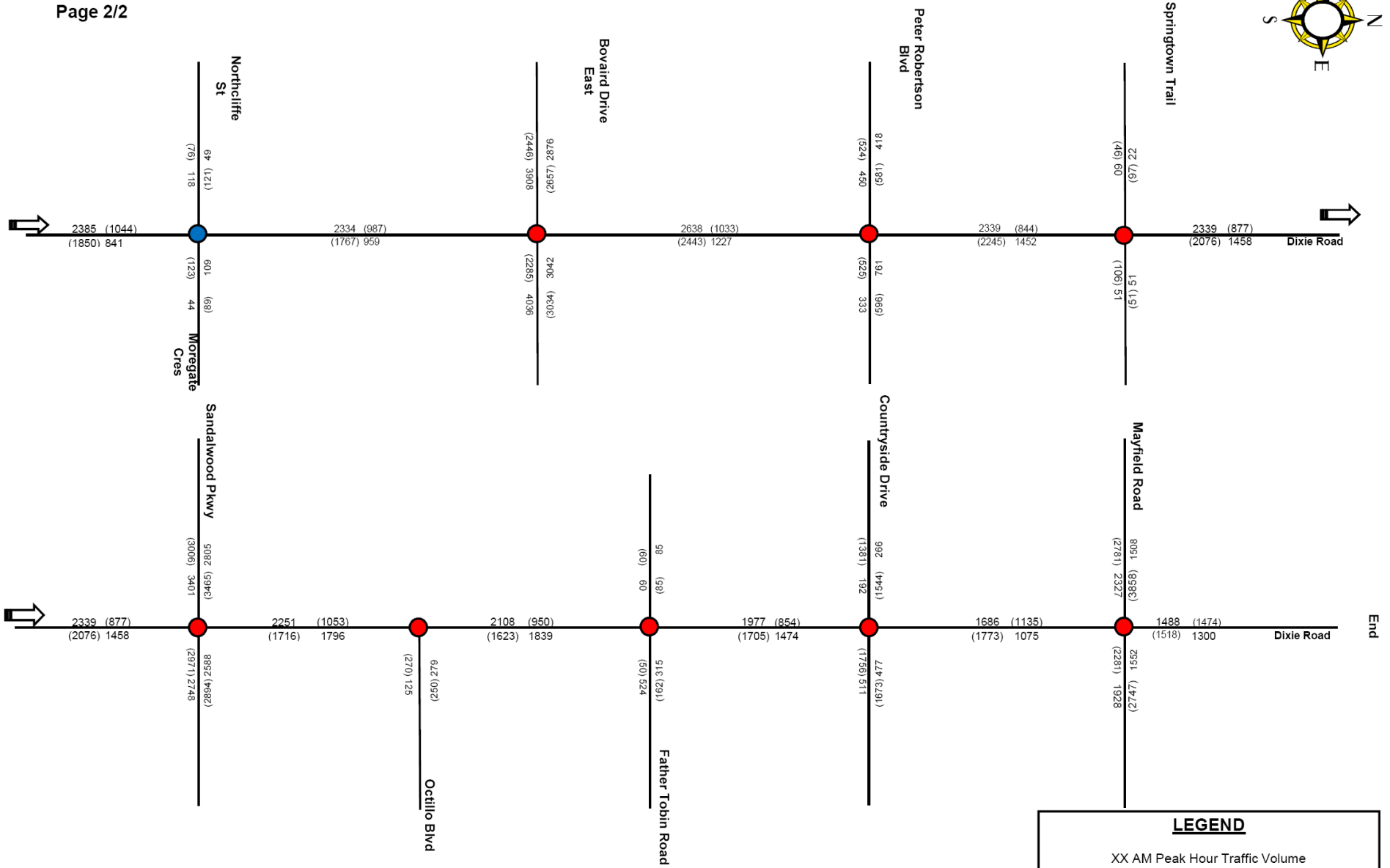
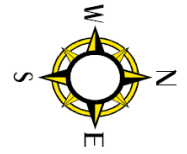
- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalised Intersection
- Unsignalised Intersection



Not to Scale

Figure 6 ~ 2031 Future Mid-Block Volumes

Note: Critical link volumes between intersections



LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Proposed Signalled



Not to Scale

4.3 Future Mid-Block Link Volume to Capacity Assessments

A planning level capacity of 900 vehicles per hour per lane was again used for Dixie Road mid-block link volume to capacity assessments. **Tables 8 and 9** present the southbound mid-block link traffic volumes (peak direction in the AM), northbound mid-block link traffic volumes (peak direction in the PM), capacities, and volume to capacity assessment for the horizon years of 2021 and 2031, respectively.

Table 8 indicates that southbound traffic demand will significantly exceed the available capacity from north of Mayfield Road to north of Hillside Drive in the AM peak by the 2021 horizon year and approaching to capacity to north and south of Queen Street East. In the PM peak hour, Dixie Road will be approaching to capacity or above capacity from north of Springtown Trail to south of Queen Street East and north of Countryside Drive.

With the Dixie Road widened to 6-lane cross section from north of Queen Street to Countryside Drive and 4-lane cross-section from north of Countryside Drive to north of Mayfield Road, sufficient capacity will be available by the 2021 horizon year in the study area in both, the AM and PM peak hours with the exceptions of the following sections along Dixie Road:

1. North of Howden Boulevard to south of Queen Street East– approaching to capacity in the AM peak hour; and
2. South of Howden Boulevard and south of Queen Street East – approaching to capacity in the PM peak hour.

By the horizon year 2031, continued growth in traffic volumes along Dixie Road will worsen both the southbound and northbound direction traffic operations without the Dixie Road improvements. **Table 9** dictates that with the Dixie Road improvements (six lanes up to Countryside Drive) will operate by the horizon year of 2031 as following:

1. Between north of Sandalwood Pkwy and south of Queen Street East – approaching or above capacity in the AM peak hour;
2. A section between Mayfield Road and Countryside Drive – approaching to capacity in both AM and PM peak hours;
3. Between south of Lascelles Boulevard and south of Queen Street East - approaching to capacity in the PM peak hour; and
4. A section between Peter Robertson Boulevard and Bovaird Drive East – approaching to capacity in the PM peak hour.

In future, it is clear that transit will have to play a larger role than forecast and/or a more mature Brampton would hope to see some changes in trip distribution taking place. Improvements to the adjacent north-south corridors widened to 6 six lanes by 2021 could potentially direct some of the traffic away from Dixie Road which might overcome the capacity deficiencies predicted by the horizon year of 2031.

The volume to capacity assessment for the Dixie Road section between Countryside Drive and Mayfield Road has indicated that this section will have a sufficient capacity by 2021 horizon year and will be approaching to capacity by 2031 horizon year.

Table 8 ~ 2021 Mid-Block Link Volume* to Capacity Assessment

Roadway Locations along Dixie Road	Dixie Road Without Improvements						Dixie Road With Improvements					
	Southbound, AM Peak Hour			Northbound, PM Peak Hour			Southbound, AM Peak Hour			Northbound, PM Peak Hour		
	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C
North of Mayfield Road	1396	900	1.55	1143	900	1.27	1396	1800	0.78	1143	1800	0.64
Between Mayfield Road and Countryside Drive	1526	900	1.70	1160	900	1.29	1526	1800	0.85	1160	1800	0.64
Between Countryside Drive and Father Tobin Road	1789	1800	0.99	1131	1800	0.63	1789	2700	0.66	1131	2700	0.42
Between Father Tobin Road and Octillo Boulevard	1914	1800	1.06	1145	1800	0.64	1914	2700	0.71	1145	2700	0.42
Between Octillo Boulevard and Sandalwood Pkwy	1991	1800	1.11	1253	1800	0.70	1991	2700	0.74	1253	2700	0.46
Between Sandalwood Pkwy and Springtown Trail	2054	1800	1.14	1551	1800	0.86	2054	2700	0.76	1551	2700	0.57
Between Springtown Trail and Peter Robertson Boulevard	2045	1800	1.14	1697	1800	0.94	2045	2700	0.76	1697	2700	0.63
Between Peter Robertson Boulevard and Bovaird Drive East	2288	1800	1.27	1955	1800	1.09	2288	2700	0.85	1955	2700	0.72
Between Bovaird Drive East and Northcliff St.-Moregate Crescent	2141	1800	1.19	1551	1800	0.86	2141	2700	0.79	1551	2700	0.57
Between Northcliff St.-Moregate Crescent and North Park Drive	2202	1800	1.22	1646	1800	0.91	2202	2700	0.82	1646	2700	0.61
Between North Park Drive and Northampton Street	2146	1800	1.19	1784	1800	0.99	2146	2700	0.79	1784	2700	0.66
Between Northampton Street and Williams Pkwy	2268	1800	1.26	2016	1800	1.12	2268	2700	0.84	2016	2700	0.75
Between Williams Pkwy and Lascelles Boulevard	2240	1800	1.24	2027	1800	1.13	2240	2700	0.83	2027	2700	0.75
Between Lascelles Boulevard and Howden Boulevard	2379	1800	1.32	2149	1800	1.19	2379	2700	0.88	2149	2700	0.80
Between Howden Boulevard and Hazelwood Drive	2433	1800	1.35	2298	1800	1.28	2433	2700	0.90	2298	2700	0.85
Between Hazelwood Drive and Hillside Drive	2503	1800	1.39	2313	1800	1.29	2503	2700	0.93	2313	2700	0.86
Between Hillside Drive and Queen Street East	2551	2700	0.94	2371	2700	0.88	2551	2700	0.94	2371	2700	0.88
South of Queen Street East	2524	2700	0.93	2586	2700	0.96	2524	2700	0.93	2586	2700	0.96

*Critical link volumes between intersections

Table 9 ~ 2031 Mid-Block Link Volume* to Capacity Assessment

Roadway Locations along Dixie Road	Dixie Road Without Improvements						Dixie Road With Improvements					
	Southbound, AM Peak Hour			Northbound, PM Peak Hour			Southbound, AM Peak Hour			Northbound, PM Peak Hour		
	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C	Link Volume	Capacity	V/C
North of Mayfield Road	1488	900	1.65	1518	900	1.69	1488	1800	0.83	1518	1800	0.84
Between Mayfield Road and Countryside Drive	1686	900	1.87	1773	900	1.97	1686	1800	0.94	1773	1800	0.99
Between Countryside Drive and Father Tobin Road	1977	1800	1.10	1705	1800	0.95	1977	2700	0.73	1705	2700	0.63
Between Father Tobin Road and Octillo Boulevard	2108	1800	1.17	1623	1800	0.90	2108	2700	0.78	1623	2700	0.60
Between Octillo Boulevard and Sandalwood Pkwy	2251	1800	1.25	1716	1800	0.95	2251	2700	0.83	1716	2700	0.64
Between Sandalwood Pkwy and Springtown Trail	2339	1800	1.30	2076	1800	1.15	2339	2700	0.87	2076	2700	0.77
Between Springtown Trail and Peter Robertson Boulevard	2339	1800	1.30	2245	1800	1.25	2339	2700	0.87	2245	2700	0.83
Between Peter Robertson Boulevard and Bovaird Drive East	2638	1800	1.47	2443	1800	1.36	2638	2700	0.98	2443	2700	0.90
Between Bovaird Drive East and Northcliff St.-Moregate Crescent	2334	1800	1.30	1767	1800	0.98	2334	2700	0.86	1767	2700	0.65
Between Northcliff St.-Moregate Crescent and North Park Drive	2385	1800	1.33	1850	1800	1.03	2385	2700	0.88	1850	2700	0.69
Between North Park Drive and Northampton Street	2323	1800	1.29	1961	1800	1.09	2323	2700	0.86	1961	2700	0.73
Between Northampton Street and Williams Pkwy	2489	1800	1.38	2223	1800	1.24	2489	2700	0.92	2223	2700	0.82
Between Williams Pkwy and Lascelles Boulevard	2668	1800	1.48	2271	1800	1.26	2668	2700	0.99	2271	2700	0.84
Between Lascelles Boulevard and Howden Boulevard	2608	1800	1.45	2394	1800	1.33	2608	2700	0.97	2394	2700	0.89
Between Howden Boulevard and Hazelwood Drive	2685	1800	1.49	2539	1800	1.41	2685	2700	0.99	2539	2700	0.94
Between Hazelwood Drive and Hillside Drive	2768	1800	1.54	2555	1800	1.42	2768	2700	1.03	2555	2700	0.95
Between Hillside Drive and Queen Street East	2820	2700	1.04	2620	2700	0.97	2820	2700	1.04	2620	2700	0.97
South of Queen Street East	2759	2700	1.02	2854	2700	1.06	2759	2700	1.02	2854	2700	1.06

*Critical link volumes between intersections

4.4 Validation of Mid-Block Link Volumes

The validation of the mid-block link volumes calculated in this report was conducted comparing with the Emme/2 link volumes from the updated TTMP report for the PM peak hour for 2031 horizon year along Dixie Road. Only two locations were found identical along Dixie Road and comparison is presented in **Table 10**.

Table 10 ~ Validation of Mid-Block Link Volumes

Locations	Updated TTMP Data			Dixie Road EA Data		
	Capacity	Volumes	V/C	Capacity	Volumes	V/C
North of Bovaird Drive East	2700	2450	0.91	2700	2443	0.91
North of Queen Street	2070*	2060*	1.00	2700	2620	0.97

*Reduced capacity assuming one HOV lane

Tables 10 indicates that volume to capacity ratio computed along Dixie Road using future growth rate factors is identical to the Emme/2 outputs from the updated TTMP report at a location north of Bovaird Drive East and slightly lower (about 3 percent) at north of Queen Street.

4.5 2021 Future Traffic Conditions

As discussed in the previous section, considerable capacity shortfall is expected without the Dixie Road Improvements. The volume to capacity assessment in a corridor with traffic signals and driveways is an approximate capacity requirements measure at mid-block while intersection operational analysis provides geometric requirements based on the signal timings and traffic conflicting flows through the intersections.

The following sections will provide traffic operations and turning lane storage requirements.

4.5.1 2021 Future Traffic Operations Without Dixie Road Improvements

The mid-block link volumes shown in **Figure 5** were converted to 2021 future turning movement counts by adopting *Fratar* methodologies using existing turning counts as base volumes and resulting 2021 future turning movement counts are shown in **Figure 7**.

In order to gauge the traffic growth impacts on the existing intersection operations, traffic operation analysis was completed using 2021 future traffic and optimizing signal timings/phasing where it was necessary.

The east-west lane configuration at the intersection of Dixie Road with Mayfield Road was utilized from the *Mayfield West Industrial Lands Transportation Impact Assessment* report. Based upon the traffic volumes, the mitigated improvements were also introduced to the east-west direction at the following intersections:

Dixie Road at Mayfield Road: eastbound approach – double left, three thru and a right and westbound approach – a left, three thru with shared right turn lanes;

Dixie Road at Countryside Drive: eastbound approach – a left, two thru with shared right and westbound approach - a left, two thru with shared right turn lanes;

Dixie Road at Sandalwood Pkwy: eastbound approach – double left, three thru with shared right and westbound approach – double left, three thru with shared right turn lanes;

Dixie Road at Bovaird Drive East: eastbound approach – double left, three thru and right and westbound approach – double left, three thru and a right turn lanes; and

Dixie Road at Queen Street East: westbound approach – double left, three thru and a right turn lanes.

The capacity analysis results for the signalized intersections are summarized in **Table 11**. Additional lanes introduced on east-west direction to the existing intersection lane configuration are shown in red color. Detailed Synchro output sheets are provided in **Appendix E**.

Table 11 ~ Summary of 2021 Future Intersections Operations Without Dixie Road Improvements

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Signalized							
Dixie Road at Mayfield Road	Overall	F	143	1.32	F	166	1.82
	EBLL	E	79	0.96	F	398	1.73
	EBTTT	E	60	0.95	D	49	0.90
	EBR	D	36	0.21	C	33	0.30
	WBL	E	57	0.89	D	44	0.69
	WBTTT-R	E	57	0.89	F	205	1.34
	NBL	F	141	1.00	F	504	2.01
	NBT	E	58	0.93	D	36	0.75
	NBR	C	26	0.16	C	21	0.08
	SBL	E	60	0.82	D	48	0.77
SBT-R	F	402	1.80	F	182	1.30	
Dixie Road at Countryside Drive	Overall	F	150	1.27	E	61	1.08
	EBL	D	44	0.01	F	192	1.17
	EBTT-R	D	49	0.31	D	48	0.74
	WBL	F	87	0.96	F	103	0.93
	WBTT-R	D	39	0.18	E	72	0.98
	NBL	F	158	1.06	B	14	0.22
	NBT	E	66	1.04	D	50	0.96
	NBR	B	14	0.28	B	16	0.10
	SBL	C	23	0.24	F	149	1.15
SBT-R	F	268	1.53	C	21	0.56	
Dixie Road at Father Tobin Road	Overall	C	22	0.82	B	10	0.54
	EBL-T-R	C	24	0.09	B	20	0.09
	WBL-T-R	D	38	0.74	C	23	0.43
	NBL-TT	B	21	0.47	A	10	0.58
	NBR	B	11	0.35	A	6	0.02
	SBL	C	23	0.60	A	6	0.03
	SBTT-R	C	22	0.86	A	8	0.34

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Octillo Boulevard	Overall	B	13	0.72	B	11	0.53
	WBL	D	43	0.57	C	27	0.48
	WBR	D	37	0.21	C	23	0.04
	NBTT	A	9	0.64	A	10	0.54
	NBR	A	5	0.05	A	7	0.17
	SBL	B	12	0.44	B	12	0.41
	SBTT	B	12	0.75	A	9	0.38
Dixie Road at Sandalwood Pkwy	Overall	F	135	1.28	F	104	1.16
	EBLL	F	110	1.04	F	180	1.22
	EBTTT-R	F	220	1.40	F	120	1.17
	WBL	F	84	0.93	E	67	0.76
	WBTTT-R	E	69	1.03	F	123	1.18
	NBL	F	120	1.04	F	112	1.10
	NBTT	F	87	1.05	D	44	0.77
	NBR	C	34	0.18	C	34	0.31
	SBL	F	92	0.96	F	153	1.17
	SBTT	F	177	1.28	C	34	0.31
SBR	E	57	0.93	C	32	0.59	
Dixie Road at Springtown Trail	Overall	A	6	0.67	A	5	0.51
	EBL	D	49	0.17	D	48	0.18
	EBT-R	D	49	0.15	D	46	0.10
	WBL	D	54	0.40	D	51	0.30
	WBT-R	D	47	0.01	D	46	0.06
	NBL	A	3	0.05	A	3	0.10
	NBTT	A	4	0.46	A	4	0.52
	NBR	A	2	0.02	A	2	0.05
	SBL	A	2	0.02	A	3	0.05
	SBTTT	A	6	0.70	A	3	0.24
SBR	A	2	0.01	A	2	0.01	
Dixie Road at Peter Robertson Boulevard	Overall	D	38	0.95	C	24	0.67
	EBL	C	34	0.35	C	35	0.30
	EBTT-R	D	40	0.35	D	42	0.56
	WBL	E	77	0.96	D	39	0.61
	WBTT-R	D	44	0.61	D	41	0.54
	NBL	C	30	0.48	B	14	0.40
	NBTT	B	14	0.52	B	18	0.73
	NBR	A	9	0.01	A	10	0.11
	SBL	C	25	0.51	D	45	0.64
	SBTT	D	45	0.99	B	14	0.32
SBR	B	13	0.04	B	11	0.02	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Bovaird Drive East	Overall	F	187	1.34	F	83	1.24
	EBLL	F	185	1.19	F	235	1.35
	EBTTT	F	337	1.66	D	38	0.83
	EBR	C	29	0.28	C	24	0.09
	WBL	F	308	1.51	E	64	0.72
	WBTTT	F	121	1.17	E	67	1.03
	WBR	C	26	0.11	C	30	0.46
	NBL	D	45	0.58	C	30	0.45
	NBTT	D	42	0.73	F	131	1.17
	NBR	C	31	0.07	C	32	0.15
	SBL	F	136	1.18	F	319	1.58
	SBTT	F	133	1.20	D	36	0.49
	SBR	C	26	0.25	C	31	0.08
Dixie Road at North Park Drive	Overall	C	31	0.82	C	27	0.72
	EBL	D	38	0.36	D	48	0.58
	EBTT-R	C	34	0.26	C	35	0.33
	WBL	D	42	0.52	D	39	0.42
	WBTT-R	D	36	0.41	D	37	0.45
	NBL	E	65	0.65	C	22	0.40
	NBTT	C	21	0.42	C	28	0.79
	NBR	B	17	0.05	B	16	0.19
	SBL	B	12	0.29	D	53	0.82
	SBTT-R	C	34	0.96	B	12	0.38
Dixie Road at Northampton Street	Overall	C	32	0.89	B	17	0.65
	EBL-T-R	D	41	0.25	D	42	0.17
	WBL-T-R	D	54	0.62	D	46	0.36
	NBL	C	32	0.38	A	8	0.31
	NBTT	B	12	0.35	B	17	0.74
	NBR	A	9	0.04	A	9	0.10
	SBL	A	9	0.03	B	14	0.12
	SBTT	D	38	0.98	B	12	0.38
	SBR	A	10	0.02	A	9	0.04
Dixie Road at Williams Pkwy	Overall	F	163	1.37	F	113	1.16
	EBL	C	21	0.31	F	107	1.05
	EBTT-R	F	159	1.26	D	43	0.80
	WBL	F	199	1.29	D	36	0.73
	WBTT-R	C	29	0.62	F	148	1.22
	NBL	E	55	0.57	C	31	0.71
	NBTT-R	D	42	0.70	F	176	1.30
	SBL	C	33	0.60	F	95	0.95
	SBTT	F	295	1.56	D	41	0.65
SBR	C	29	0.23	C	33	0.18	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Howden Boulevard	Overall	D	35	0.90	D	41	0.91
	EBL	D	37	0.17	D	40	0.31
	EBTT-R	D	44	0.66	D	36	0.27
	WBL	E	60	0.60	D	52	0.66
	WBTT-R	D	38	0.33	D	40	0.48
	NBL	C	25	0.28	C	24	0.57
	NBTT-R	B	15	0.30	E	55	1.04
	SBL	A	9	0.19	D	48	0.69
	SBTT-R	D	38	0.99	B	11	0.42
Dixie Road at Queen Street East ⁽¹⁾	Overall	F	134	1.31	F	148	1.51
	EBL	C	29	0.38	F	276	1.49
	EBTTT	F	237	1.43	D	51	0.96
	EBR	C	31	0.27	C	32	0.48
	WBL	F	150	1.14	F	252	1.39
	WBTTT	C	34	0.77	F	186	1.32
	WBR	C	22	0.05	C	24	0.16
	NBLL	F	122	0.96	F	158	1.19
	NBTTT	D	43	0.41	F	243	1.43
	NBR	D	40	0.10	D	38	0.32
	SBLL	D	52	0.64	F	117	0.98
	SBTTT	F	158	1.25	E	64	0.92
	SBR	C	34	0.38	D	42	0.10
Unsignalized Intersections							
Dixie Road at Northcliffe Street	Average Delay	--	12	--	--	7	--
	EBL-T-R	F	217	1.13	E	43	0.41
	WBL-T-R	F	123	0.87	F	182	0.98
	NBL-TT-R	A	3	0.26	A	2	0.49
	SBL-TT	A	1	0.81	A	1	0.33
	SBR	A	0	0.01	A	0	0.01
Dixie Road at Lascelles Boulevard.	Average Delay	--	8	--	--	1	--
	EBL-R	F	183	1.12	C	16	0.17
	NBL	D	28	0.11	B	11	0.13
	NBTT	A	0	0.21	A	0	0.59
	SBTT	A	0	0.69	A	0	0.29
	SBR	A	0	0.02	A	0	0.03
Dixie Road at Hazelwood Road	Average Delay	--	1	--	--	1	--
	EBL-R	E	41	0.25	B	14	0.03
	NBL	D	27	0.04	B	10	0.03
	NBTT	A	0	0.17	A	0	0.68
	SBTTR	A	0	0.95	A	0	0.44

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Hillside Drive	Average Delay	--	2	--	--	1	--
	EBL-R	E	38	0.57	B	15	0.16
	NBL	D	34	0.20	B	12	0.18
	NBTTT	A	0	0.15	A	0	0.44
	SBTTT-R	A	0	0.97	A	0	0.26

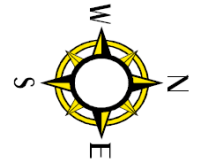
EBL= eastbound left, NBT= northbound through, WBL-T-R= westbound shared left-through-right, EBL-R, eastbound shared left-right

Note: (1) Subsequent traffic analysis has confirmed that the current intersection configuration is sufficient to address the needs for the 2021 horizon year, without the addition of an additional westbound left turn lane.

Table 11 indicates that without improvement to Dixie Road, a continued traffic growth would deteriorate the intersection level of service and also increase the capacity deficiencies along southbound in the AM peak hour and northbound in the PM peak hour. In the east-west direction, almost all major crossing roadways to Dixie Road will experience longer delays and capacity deficiencies in the eastbound during the AM peak hour and westbound during the PM peak hour.

All four study area unsignalized intersections will experience longer delays at the minor roadway, specifically left out movements due to higher thru volumes along Dixie Road in both the AM and PM peak hours. The eastbound approach of the unsignalized intersection of Dixie Road and Northcliffe Street will experience delay of 230 seconds (about 4 minutes) per vehicle in the morning peak hour which is noteworthy.

Figure 7 ~ 2021 Future Traffic Volumes



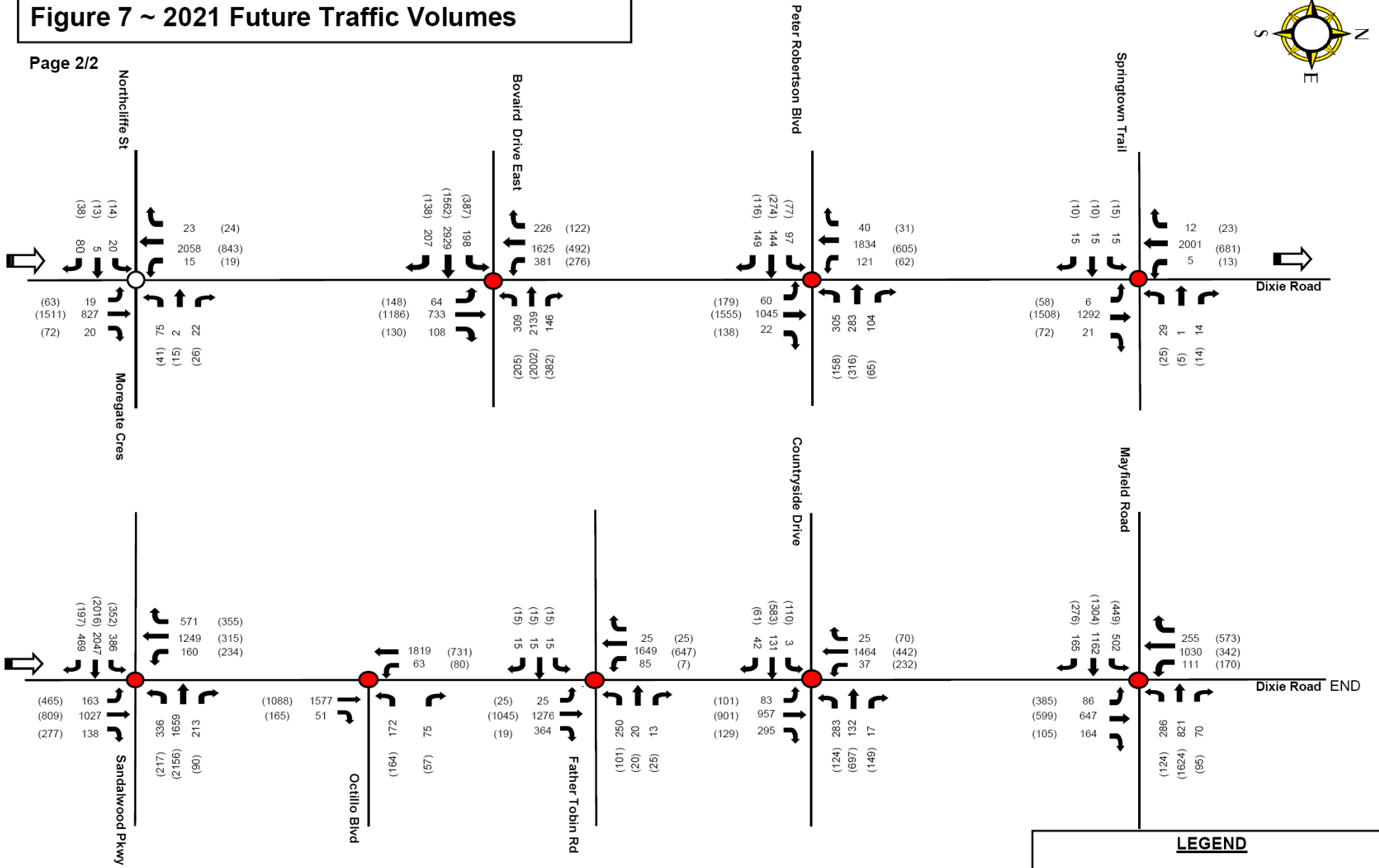
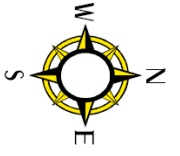
LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalised Intersection
- Unsignalised Intersection



Not to Scale

Figure 7 ~ 2021 Future Traffic Volumes



LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Unsignalled Intersection



Not to Scale

4.5.2 Left Turn Lane and Traffic Signal Warrant Analysis

The unsignalized intersections of the study area were assessed for the left turn lanes and traffic signal requirements. In order to avoid disruption to thru traffic and also for safety reasons, separate left turn lanes are required at unsignalized intersections based on the left turning, advancing and opposing vehicles.

Due to longer delays at the minor roadway of the study area unsignalized intersections presented in **Table 11**, traffic signal warrant analyses were conducted utilizing future 8-hour traffic volumes. The 8-hour future traffic volumes were developed utilizing growth rate factors calculated by comparing existing and projected 2021 future turning movement counts.

Dixie Road / Northcliffe Street - Moregate Crescent Intersection:

Left Turn Lane Warrant Analysis

Left turn lane warrant analysis was conducted using the *Geometric Design Standards for Ontario Highway* manual published by the Ministry of Transportation Ontario (MTO). The left turn lane warrant analysis and determination of storage lane length for unsignalized intersections are based on turning, advancing and opposing design hourly volumes and design speed of the roadway.

Figure EB-1, *Four-Lane Undivided Highways Unsignalized* from the MTO Geometric Design Guidelines was used in the analysis. A left turn lane warrant analysis using critical volumes from the AM and PM peak hours for the northbound and southbound approaches was used. Based on the analysis results it is concluded that each approach requires a separate left turn lane with a minimum storage length of 25 metres under 2021 future total traffic. A left lane warrant analysis sheet is provided at **Appendix F**.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis was completed using **MTO Book-12** methodologies for the 2021 future total traffic. The MTO Book 12 suggests the following criteria based on traffic volumes to justify the traffic signal installation:

- 1. Justification 1: Minimum Vehicle Volumes**
 - A. Total Volumes (Main Road)
 - B. Crossing Volumes (Minor Road)

- 2. Justification 2: Delay to Cross Traffic**
 - A. Main Road
 - B. Crossing Road

- 3. Justification 3: Combination of Volume/Delay**
 - A. Justification 1A and 1B
 - B. Justification 2A and 2B

- 4. Justification 4: Minimum 4-Hour Vehicle Volume**

The need for traffic signal installation must be considered if, Justification 1 (both 1A and 1B) or Justification 2 (both 2A and 2B) is 100% fulfilled. If justification 1 (both 1A and 1B) or Justification 2 (both 2A and 2B) do meet 100% but are at least 80% fulfilled, the lesser fulfilled of both the Justifications can be used in the

assessment of Justification 3, the combination of Volume/Daly justification. Justification 4 is considered if for each of the four highest hours from 24 hour counts for average day are 100%.

The 2021 future traffic data for the 8-hour turning movement volumes was developed by applying growth rate factor to the existing 8-hour turning movement counts data. The growth rate factor was developed by comparing existing and 2021 future projected turning movement counts at this intersection. **Table 12** presents the summary of traffic signal warrant analysis.

Table 12 ~ Summary of results, Signal Warrant Analysis (2021), Dixie Road/Northcliffe Street

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	77%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	79%		
3. Combination	A. Justification 1	77%		NO
	B. Justification 2	79%		
4. 4-Hrs Volumes		75%		NO

As shown in **Table 12**, traffic signal warrants are shy of three percent and one percent from the minimum vehicular volumes (crossing volumes) and delay to cross traffic (crossing road), respectively, at the Dixie Road/Northcliffe Street intersection. Although traffic analysis presented in **Table 11** indicated longer delays at the crossing roadway approaches, specifically left out movements. A detailed traffic signal warrant analysis calculation is provided in **Appendix G**

Dixie Road / Lascelles Boulevard:

Traffic Signal Warrant Analysis

The 2021 future traffic data for the 8-hour turning movement volumes was developed by applying growth rate factor to the existing 8-hour turning movement counts data. The growth rate factor was developed by comparing existing and 2021 future projected turning movement counts at this intersection. **Table 13** presents the summary of traffic signal warrant analysis.

Table 13 ~ Summary of results, Signal Warrant Analysis (2021), Dixie Road/Lascelles Boulevard

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	37%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	41%		
3. Combination	A. Justification 1	37%		NO
	B. Justification 2	41%		
4. 4-Hrs Volumes		75%		NO

As shown in **Table 13**, traffic signal warrants are not met at the Dixie Road/Lascelles Boulevard intersection in the 2021 horizon year and a detailed calculation is provided in **Appendix G**.

Dixie Road / Hazelwood Drive:Traffic Signal Warrant Analysis

The 2021 future traffic data for the 8-hour turning movement volumes was developed by applying growth rate factor to the existing 8-hour turning movement counts data. The growth rate factor was developed by comparing existing and 2021 future projected turning movement counts at this intersection. **Table 14** presents the summary of traffic signal warrant analysis.

Table 14 ~ Summary of results, Signal Warrant Analysis (2021), Dixie Road/Hazelwood Drive

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	9%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	9%		
3. Combination	A. Justification 1	9%		NO
	B. Justification 2	9%		
4. 4-Hrs Volumes		25%		NO

As shown in **Table 14**, traffic signal warrants are not met at the Dixie Road/Hazelwood Drive intersection in the 2021 horizon year and a detailed calculation is provided in **Appendix G**.

Dixie Road / Hillside Drive:Traffic Signal Warrant Analysis

The 2021 future traffic data for the 8-hour turning movement volumes was developed by applying growth rate factor to the existing 8-hour turning movement counts data. The growth rate factor was developed by comparing existing and 2021 future projected turning movement counts at this intersection. **Table 15** presents the summary of traffic signal warrant analysis.

Table 15 ~ Summary of results, Signal Warrant Analysis (2021), Dixie Road/Hillside Drive

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	25%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	18%		
3. Combination	A. Justification 1	25%		NO
	B. Justification 2	18%		
4. 4-Hrs Volumes		68%		NO

As shown in **Table 15**, traffic signal warrants are not met at the Dixie Road/Hillside Drive intersection in the 2021 horizon year and a detailed calculation is provided in **Appendix G**.

4.5.3 2021 Future Traffic Operations With Dixie Road Improvements

In this scenario, Dixie Road was assumed to be widened to a 6-lane cross-section between north of Queen Street East to south of Countryside Drive and 4-lane cross-section from north of Countryside Drive to north of Mayfield Road. Based on the capacity analysis results presented in **Table 11**, additional modifications to the lane configurations were recommended at the following intersections:

Dixie Road at Mayfield Road: eastbound approach – additional left turn lane, westbound approach – an exclusive right turn lane;

Dixie Road at Countryside Drive: eastbound approach – an exclusive right turn lane, westbound approach – an exclusive right turn lane;

Dixie Road at Father Tobin Road: northbound approach – a left turn lane;

Dixie Road at Sandalwood Pkwy: eastbound approach – an exclusive right turn lane, westbound approach – an exclusive right turn lane; and

Dixie Road at Northcliffe Street: northbound approach – a left turn lane, southbound approach – a left turn lane; and

Dixie Road at William Pkwy: eastbound approach – an exclusive right turn lane, westbound approach – an exclusive right turn lane, northbound approach – an exclusive right turn.

The future 2021 traffic volumes were analysed using recommend lane configurations as shown in **Figure 8**. A cycle length of 120 seconds was used with optimized splits where it was necessary. The capacity analysis results for the signalized and unsignalized intersections are summarized in **Table 16**. Detailed Synchro outputs are provided in **Appendix H**.

Table 16 ~ Summary of 2021 Future Intersection Operations With Dixie Road Improvements

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Signalized							
Dixie Road at Mayfield Road	Overall	D	52	0.84	D	50	0.94
	EBLL	E	79	0.96	F	90	0.98
	EBTTT	E	67	0.98	C	30	0.65
	EBR	D	37	0.23	C	23	0.22
	WBL	F	112	1.03	C	27	0.53
	WBTTT	D	51	0.82	E	60	0.99
	WBR	D	38	0.12	C	29	0.17
	NBL	D	44	0.65	E	79	0.99
	NBTT	C	30	0.49	D	41	0.62
	NBR	C	25	0.12	C	33	0.07
	SBL	C	23	0.39	D	43	0.69
	SBTT	D	35	0.75	D	40	0.41
SBR	C	27	0.32	E	57	0.92	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Countryside Drive	Overall	C	27	0.66	C	32	0.61
	EBL	D	42	0.01	C	28	0.46
	EBTT	D	46	0.27	D	36	0.52
	EBR	D	43	0.03	C	30	0.06
	WBL	D	35	0.64	C	28	0.40
	WBTT	C	29	0.12	D	40	0.64
	WBR	C	28	0.01	C	32	0.18
	NBL	C	21	0.48	C	26	0.28
	NBTTT	C	21	0.46	C	34	0.53
	NBR	B	20	0.30	C	28	0.13
	SBL	B	17	0.13	C	24	0.62
	SBTTT-R	C	30	0.74	C	23	0.25
Dixie Road at Father Tobin Road	Overall	B	15	0.64	A	9	0.40
	EBL-T-R	C	27	0.08	B	17	0.09
	WBL-T-R	D	44	0.76	B	20	0.42
	NBL	B	12	0.22	A	9	0.06
	NBTTT	B	12	0.44	A	8	0.39
	NBR	B	11	0.26	A	7	0.01
	SBL	B	16	0.45	A	7	0.03
	SBTTT-R	B	14	0.58	A	8	0.25
Dixie Road at Octillo Boulevard	Overall	B	10	0.54	B	10	0.42
	WBL	D	41	0.56	C	24	0.46
	WBR	D	35	0.21	B	20	0.04
	NBTTT	A	7	0.45	A	9	0.40
	NBR	A	5	0.05	A	7	0.15
	SBL	B	11	0.40	B	11	0.39
SBTTT	A	9	0.53	A	8	0.28	
Dixie Road at Sandalwood Pkwy	Overall	E	57	0.99	E	73	1.05
	EBLL	E	74	0.90	F	238	1.35
	EBTTT	D	53	0.99	D	53	0.98
	EBR	C	34	0.63	C	26	0.25
	WBLL	F	135	1.10	F	147	1.09
	WBTTT	D	42	0.88	F	91	1.10
	WBR	C	28	0.29	C	25	0.10
	NBL	F	121	1.04	F	86	1.03
	NBTTT	D	47	0.80	D	37	0.55
	NBR	C	35	0.11	D	36	0.38
	SBL	F	92	0.96	E	70	0.91
	SBTTT	E	65	0.98	C	35	0.24
	SBR	E	62	0.95	D	37	0.64

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Springtown Trail	Overall	A	4	0.48	A	4	0.36
	EBL	D	49	0.17	D	52	0.19
	EBT-R	D	49	0.15	D	50	0.11
	WBL	D	55	0.38	E	56	0.38
	WBT-R	D	48	0.02	D	49	0.01
	NBL	A	3	0.04	A	2	0.10
	NBTTT	A	3	0.32	A	3	0.36
	NBR	A	2	0.02	A	2	0.05
	SBL	A	2	0.02	A	2	0.05
	SBTTT	A	4	0.48	A	2	0.16
	SBR	A	2	0.01	A	2	0.01
Dixie Road at Peter Robertson Boulevard	Overall	C	25	0.71	C	21	0.52
	EBL	D	36	0.36	C	35	0.30
	EBTT-R	D	42	0.46	D	42	0.56
	WBL	E	67	0.93	D	39	0.61
	WBTT-R	D	42	0.60	D	41	0.54
	NBL	C	25	0.58	B	11	0.38
	NBTTT	B	12	0.36	B	13	0.51
	NBR	A	9	0.01	A	10	0.09
	SBL	C	21	0.47	C	27	0.46
	SBTTT	B	19	0.67	B	14	0.23
	SBR	B	12	0.04	B	12	0.02
Dixie Road at Bovaird Drive East	Overall	F	121	1.32	E	74	1.04
	EBLL	F	185	1.19	F	182	1.23
	EBTTT	F	201	1.36	D	43	0.89
	EBR	C	23	0.25	C	26	0.09
	WBLL	F	424	1.77	E	73	0.80
	WBTTT	D	51	0.99	F	118	1.16
	WBR	C	21	0.10	C	33	0.40
	NBL	E	59	0.65	C	28	0.37
	NBTTT	D	40	0.57	D	51	0.89
	NBR	C	34	0.08	C	34	0.11
	SBL	F	218	1.36	F	88	1.00
	SBTTT	E	60	0.99	C	34	0.34
	SBR	C	31	0.29	C	31	0.08

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at North Park Drive	Overall	C	21	0.62	C	23	0.61
	EBL	D	38	0.36	D	48	0.58
	EBTT-R	C	34	0.26	C	35	0.33
	WBL	D	42	0.52	D	39	0.42
	WBTT-R	D	36	0.41	D	37	0.45
	NBL	E	62	0.65	C	22	0.42
	NBTTT	B	15	0.26	C	21	0.55
	NBR	B	13	0.03	B	16	0.16
	SBL	B	11	0.30	C	23	0.65
	SBTTT-R	B	16	0.67	B	13	0.26
Dixie Road at Northampton Street	Overall	B	20	0.67	B	14	0.47
	EBL-T-R	D	38	0.23	D	42	0.17
	WBL-T-R	D	47	0.54	D	46	0.36
	NBL	B	19	0.38	A	8	0.30
	NBTTT	B	12	0.25	B	13	0.51
	NBR	B	10	0.04	A	9	0.10
	SBL	A	10	0.03	A	9	0.09
	SBTTT	B	20	0.71	B	11	0.27
	SBR	B	11	0.02	A	9	0.03
	Dixie Road at Williams Pkwy	Overall	E	63	1.15	D	48
EBL		C	23	0.34	E	70	0.92
EBTT		F	103	1.13	C	31	0.54
EBR		C	26	0.30	C	27	0.18
WBL		F	236	1.38	C	22	0.54
WBTT		C	26	0.55	D	55	0.97
WBR		C	20	0.07	C	26	0.23
NBL		F	103	0.78	C	33	0.70
NBTTT		C	34	0.39	E	59	0.98
NBR		C	30	0.08	C	31	0.19
SBL		C	26	0.44	E	74	0.87
SBTTT		D	45	0.95	D	43	0.56
SBR	C	24	0.19	C	38	0.18	
Dixie Road at Howden Boulevard	Overall	C	22	0.68	C	23	0.66
	EBL	C	35	0.15	D	40	0.31
	EBTT-R	D	42	0.62	D	36	0.27
	WBL	D	51	0.53	D	52	0.66
	WBTT-R	D	36	0.31	D	40	0.48
	NBL	C	26	0.28	C	23	0.57
	NBTT-R	B	15	0.21	B	20	0.72
	SBL	A	9	0.19	D	36	0.69
SBTT-R	B	16	0.71	A	10	0.29	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Queen Street East ⁽¹⁾	Overall	F	133	1.44	F	148	1.51
	EBL	C	28	0.38	F	276	1.49
	EBTTT	F	221	1.39	D	51	0.96
	EBR	C	31	0.29	C	32	0.48
	WBLL	F	196	1.26	F	252	1.39
	WBTTT	C	34	0.77	F	186	1.32
	WBR	C	22	0.05	C	24	0.16
	NBLL	F	206	1.19	F	158	1.19
	NBTTT	D	43	0.41	F	243	1.43
	NBR	D	40	0.10	D	38	0.32
	SBLL	D	54	0.68	F	117	0.98
	SBTTT	F	158	1.25	E	64	0.92
	SBR	C	34	0.38	D	42	0.10
Unsignalized Intersections							
Dixie Road at Northcliffe Street	Average Delay	--	5	--	--	8	--
	EBL-T-R	F	119	0.87	E	49	0.45
	WBL-T-R	D	35	0.45	F	219	1.07
	NBL	B	14	0.04	A	1	0.08
	NBTTT-R	A	0	0.19	A	0	0.36
	SBL	A	10	0.02	B	11	0.03
	SBTTT-R	A	0	0.48	A	1	0.20
Dixie Road at Lascelles Boulevard.	Average Delay	--	1	--	--	1	--
	EBL-R	C	25	0.44	B	13	0.13
	NBL	B	15	0.05	B	0	0.12
	NBTTT	A	0	0.14	A	0	0.39
	SBTTT	A	0	0.46	A	0	0.19
SBR	A	0	0.02	A	0	0.03	
Dixie Road at Hazelwood Road	Average Delay	--	1	--	--	1	--
	EBL-R	E	49	0.29	C	24	.05
	NBL	C	17	0.02	B	10	0.03
	NBTTT	A	0	0.11	A	0	0.45
	SBTTT-R	A	0	0.57	A	0	0.26
Dixie Road at Hillside Drive	Average Delay	--	3	--	--	1	--
	EBL-R	F	135	0.81	D	26	0.30
	NBL	D	34	0.20	B	12	0.18
	NBTTT	A	0	0.10	A	0	0.44
	SBTTT-R	A	0	0.58	A	0	0.26

EBL=eastbound left, NBT=northbound through, WBL-T-R=westbound shared left-through-right, EBL-R, eastbound shared left-right

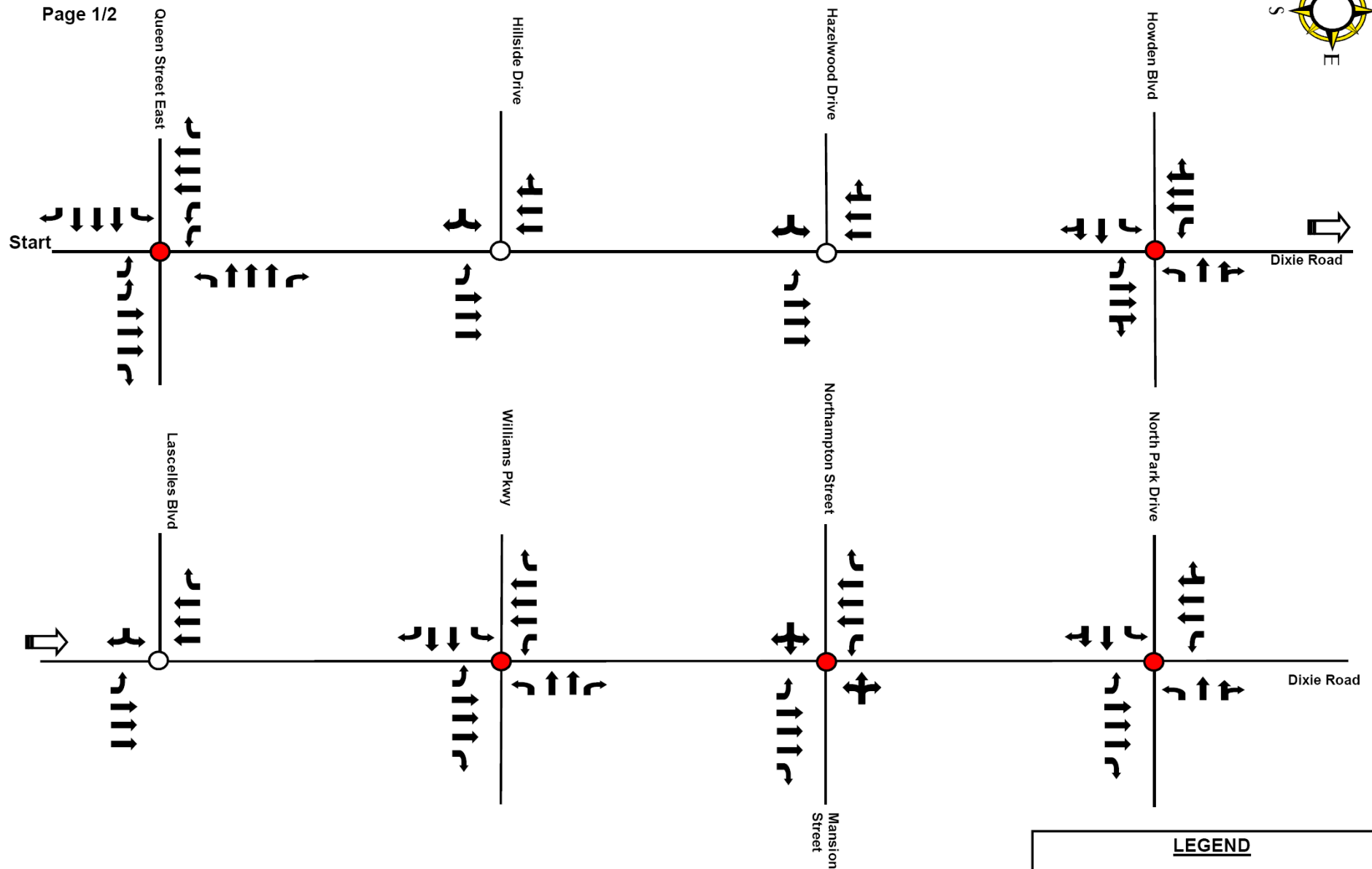
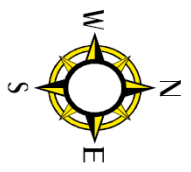
Note: (1) Subsequent traffic analysis has confirmed that the current intersection configuration is sufficient to address the needs for the 2021 horizon year, without the addition of an additional westbound left turn lane.

Table 16 indicates that the widening of Dixie Road to 6-lane cross-section from north of Queen Street to Countryside Drive would improve the overall level of service at all the study area intersections, southbound in the AM peak hour and northbound in the PM peak hour and also individual movements in both the AM and PM peak hours. This would also help to improving the east-west approaches at certain level but could not address completely the capacity deficiencies.

The intersection of Dixie Road with Mayfield Road will operate at satisfactory level of service “D” in both the AM and PM peak hours but approaching to capacity in the PM peak hour with the Dixie Road 2-lane cross-section to the north and south of Mayfield Road.

The Dixie Road improvements would also help to improve delay and capacity deficiency at the unsignalized intersections due to improved flow of thru traffic along Dixie Road.

Figure 8 ~ 2021 Intersection Lane Configuration



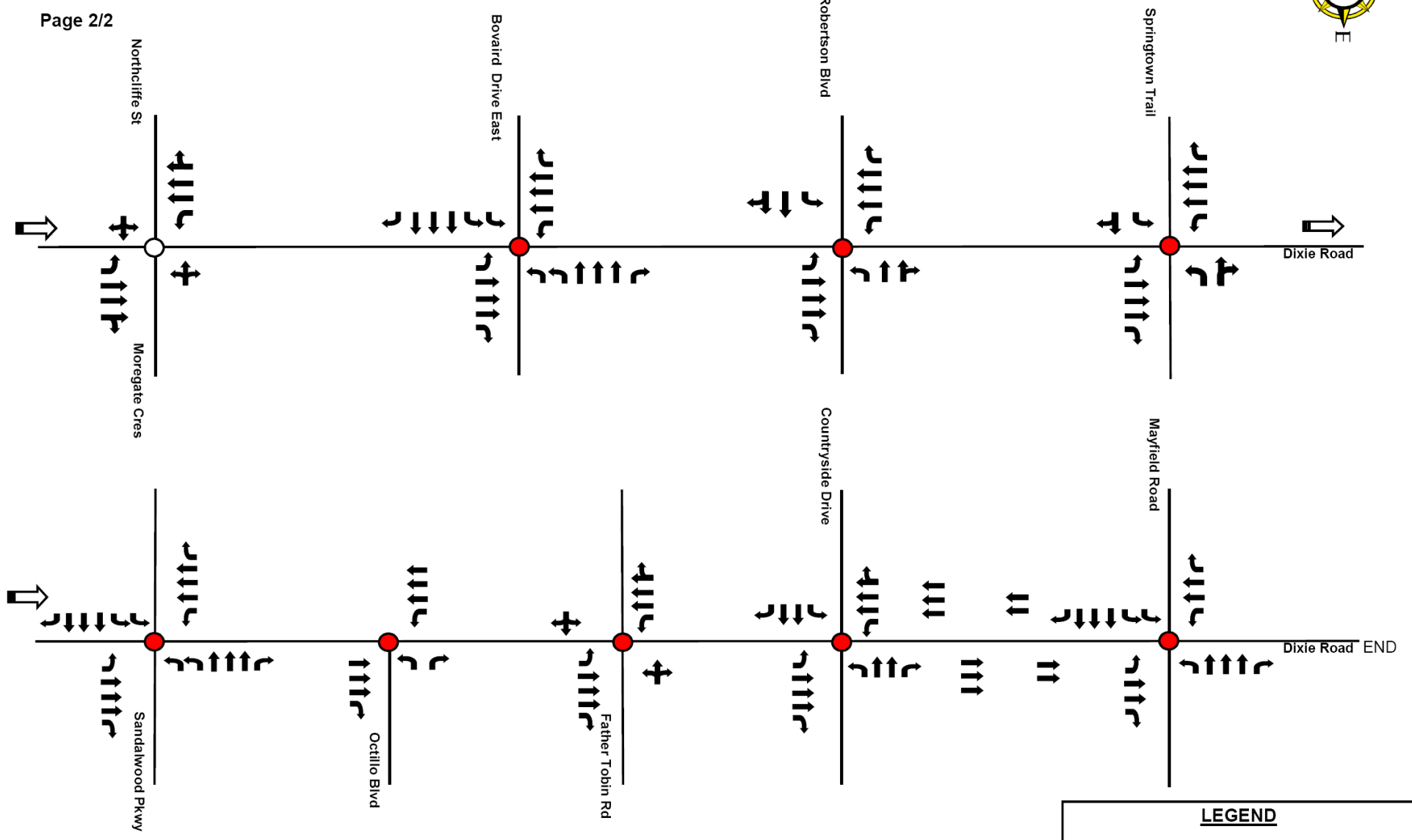
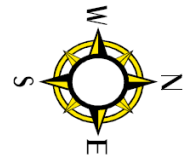
LEGEND

- Lane Configuration
- Signalised Intersection
- Unsignalised Intersection



Not to Scale

Figure 8 ~ 2021 Intersection Lane Configuration



LEGEND

- Lane Configuration
- Signalised Intersection
- Unsignalised Intersection



Not to Scale

4.5.4 2021 Future Queuing Analysis

In order to estimate turning lane storage length requirements, queuing analyses were conducted using SimTraffic 7.0 software for the 2021 traffic volumes (**Figure 7**) and future intersection lane configuration (**Figure 8**). The following parameters were used in SimTraffic;

- A seeding time of 15 minutes at the start of each run;
- A recoding time of 60 minutes;
- All other parameters were set to the SimTraffic default values; and
- Five separate runs were undertaken and averaged to conclude final queuing results.

A summary of 95th queue lengths for the left and right turn lanes at the study area intersections is presented in **Table 17**. Details of the queue length analysis are provided in **Appendix I**.

Table 17 ~ 2021 Future Traffic Queuing Summary

Intersections	Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
Signalized			
Dixie Road at Mayfield Road	EBLL*	210	197
	EBR	158	80
	WBL	172	180
	WBR	23	159
	NBL	43	197
	NBR	34	29
	SBL	37	86
	SBR	60	98
Dixie Road at Countryside Drive	EBL	5	60
	EBR	16	22
	WBL	112	73
	WBR	8	54
	NBL	37	25
	NBR	42	23
	SBL	17	62
Dixie Road at Father Tobin Road	NBL	18	10
	NBR	32	5
	SBL	36	6
Dixie Road at Octillo Boulevard	WBL	58	52
	WBR	56	35
	NBR	19	24
	SBL	32	35
Dixie Road at Sandalwood Pkwy	EBLL*	140	121
	EBR	109	90
	WBLL*	105	122
	WBR	85	87
	NBL	132	123

Intersections	Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
	NBR	52	56
	SBL	130	145
	SBR	137	85
Dixie Road at Springtown Trail	EBL	11	18
	NBL	7	47
	NBR	13	18
	SBL	21	8
	SBR	13	4
Dixie Road at Peter Robertson Boulevard	EBL	47	28
	WBL	94	56
	NBL	44	31
	NBR	16	14
	SBL	93	30
	SBR	66	10
Dixie Road at Bovaird Drive East	EBLL*	124	193
	EBR	220	264
	WBLL*	159	171
	WBR	95	185
	NBL	25	37
	NBR	30	53
	SBL	174	181
	SBR	58	37
Dixie Road at North Park Drive	EBL	41	68
	WBL	69	55
	NBL	21	38
	NBR	29	49
	SBL	29	36
Dixie Road at Northampton Street	NBL	24	30
	NBR	22	53
	SBL	7	9
	SBR	16	22
Dixie Road at Williams Pkwy	EBL	71	102
	EBR	102	50
	WBL	80	97
	WBR	30	115
	NBL	36	58
	NBR	35	66
	SBL	51	124
	SBR	46	50
Dixie Road at Howden Boulevard	EBL	26	29
	WBL	58	83
	NBL	12	43
	SBL	29	29

Intersections	Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
Dixie Road at Queen Street East ⁽¹⁾	EBL	214	199
	EBR	258	181
	WBLL*	262	248
	WBR	---	299
	NBLL*	59	158
	NBR	28	219
	SBLL*	75	97
	SBR	205	25
Unsignalized			
Dixie Road at Northcliffe Street	NBL	10	16
	SBL	6	10
Dixie Road at Lascelles Boulevard.	NBL	10	21
	SBR	2	5
Dixie Road at Hazelwood Road	NBL	7	7
Dixie Road at Hillside Drive	NBL	22	29

*averaged 95th percentile queue length for the double left turn lane

Note: (1) Subsequent traffic analysis has confirmed that the current Queen Street intersection configuration is sufficient to address the needs for the 2021 horizon year, without the addition of an additional westbound left turn lane.

Table 17 presents 95th percentile queue lengths for the right and left turn movements for the AM and PM peak hours. The critical 95th percentile queue lengths from the AM and PM peak hours, shown in bold, are recommended for storage length requirements.

4.6 2031 Future Traffic Conditions

The mid-block link volumes presented in **Figure 6** for the future 2031 horizon year were converted to 2031 future turning movement counts using existing intersection turning movement as base counts and adopting *Fratar* methodologies. The resulting 2031 future turning movement counts at the study area intersections are shown in **Figure 9**.

4.6.1 Traffic Signal Warrant Analysis

The traffic signal warrant analyses were repeated using 2031 future 8-hour traffic volumes developed utilizing growth rate factor calculated by comparing existing and projected 2031 future turning movement counts at the following intersections:

Dixie Road / Northcliffe Street - Moregate Crescent Intersection

Table 18 presents the summary of traffic signal warrant analysis at this intersection.

Table 18 ~ Summary of results, Signal Warrant Analysis (2031), Dixie Road/Northcliffe Street

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	83%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	85%		
3. Combination	A. Justification 1	83%	YES	
	B. Justification 2	85%		
4. 4-Hrs Volumes		81%		NO

As shown in **Table 18**, traffic signals are warranted at the Dixie Road/Northcliffe Street intersection in the 2031 horizon year. A detailed traffic signal warrant analysis calculation is provided in **Appendix J**.

Dixie Road / Lascelles Boulevard:

Table 19 presents the summary of traffic signal warrant analysis at this intersection.

Table 19 ~ Summary of results, Signal Warrant Analysis (2031), Dixie Road/Lascelles Boulevard

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	40%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	45%		
3. Combination	A. Justification 1	40%		NO
	B. Justification 2	45%		
4. 4-Hrs Volumes		79%		NO

As shown in **Table 19** traffic signal warrants are not met at the Dixie Road/Lascelles Boulevard intersection in the 2031 horizon year and a detailed calculation is provided in **Appendix J**.

Dixie Road / Hazelwood Drive:

Table 20 presents the summary of traffic signal warrant analysis at this intersection.

Table 20 ~ Summary of results, Signal Warrant Analysis (2031), Dixie Road/Hazelwood Drive

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	9%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	10%		
3. Combination	A. Justification 1	9%		NO
	B. Justification 2	10%		
4. 4-Hrs Volumes		27%		NO

As shown in **Table 20**, traffic signal warrants are not met at the Dixie Road/Hazelwood Drive intersection in the 2031 horizon year and a detailed calculation is provided in **Appendix J**.

Dixie Road / Hillside Drive:

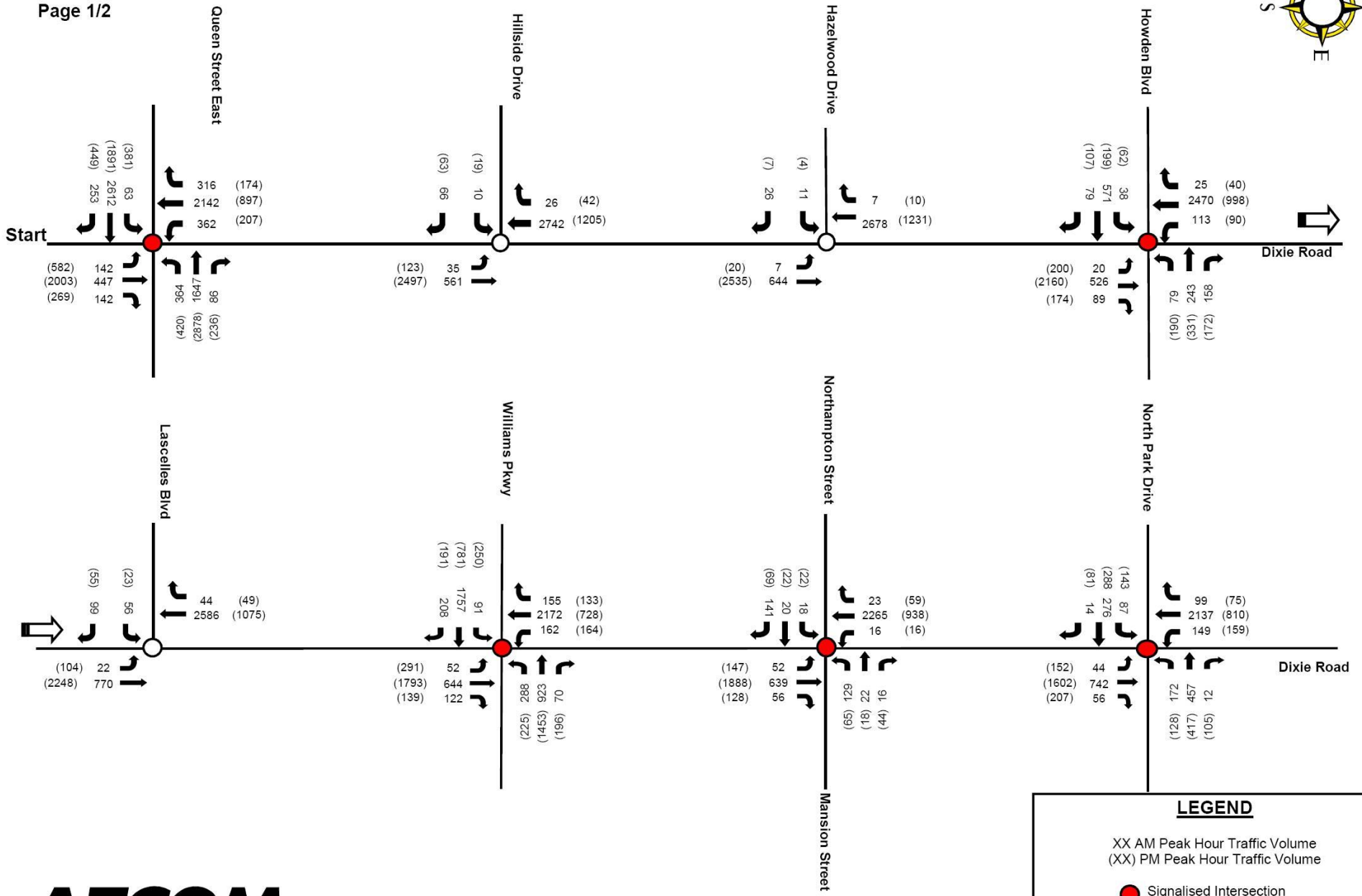
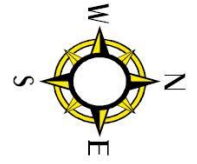
Table 21 presents the summary of traffic signal warrant analysis at this intersection.

Table 21 ~ Summary of results, Signal Warrant Analysis (2031), Dixie Road/Hillside Drive

Justification	Compliance		Signal Justified?	
			YES	NO
1. Minimum Vehicular Volumes	A. Total Volumes	100%		NO
	B. Crossing Volumes	28%		
2. Delay to Cross Traffic	A. Main Road	100%		NO
	B. Crossing Road	27%		
3. Combination	A. Justification 1	28%		NO
	B. Justification 2	27%		
4. 4-Hrs Volumes		73%		NO

As shown in **Table 21**, traffic signal warrants are not met at the Dixie Road/Hillside Drive intersection in the 2031 horizon year and a detailed calculation is provided in **Appendix J**.

Figure 9 ~ 2031 Future Traffic Volumes



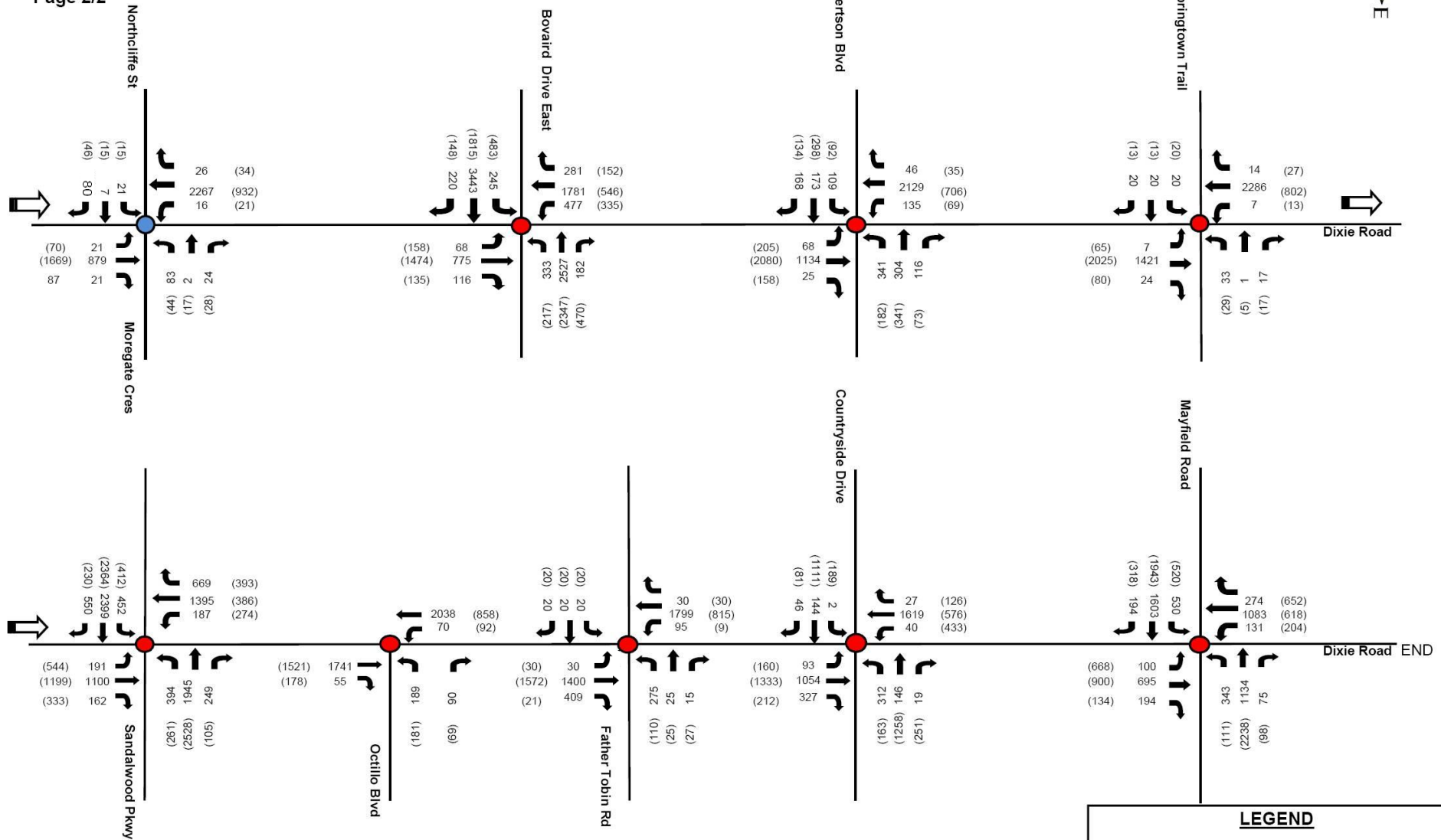
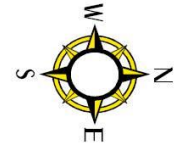
LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalised Intersection
- Unsignalized Intersection



Not to Scale

Figure 9 ~ 2031 Future Traffic Volumes



Not to Scale

LEGEND

- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- Signalled Intersection
- Proposed Signalled

4.6.2 2031 Future Traffic Operations

The traffic operations were completed in order to observe the traffic growth impacts from 2021 horizon year to 2031 horizon years on the study area intersections with the recommended future lane configurations. A cycle length of 120 seconds was used and splits/phases were optimized where it was necessary. Due to continued growth in traffic volumes along Dixie Road additional improvements are recommended at the following intersections:

Dixie Road/Mayfield Road – An additional northbound left turn lane, i.e. dual left-turn lanes;

Dixie Road/Countryside Road – An additional southbound left turn lane, i.e. dual left-turn lanes;

Dixie Road/Bovaird Drive – An additional southbound left turn lane, i.e. dual left-turn lanes; and

Dixie Road/Northcliffe Street – Traffic signal was introduced based on the traffic signal warrant analysis presented in the previous section.

A recommended intersection lane configuration at the study area intersections is illustrated in **Figure 10**. The capacity analysis results for the study area intersections are summarized in **Table 22**. A cycle length of 120 seconds was used and splits/phases were optimized where it was deemed necessary. Detailed Synchro output sheets are provided in **Appendix K**.

Table 22 ~ Summary of 2031 Future Intersections Operations

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Signalized							
Dixie Road at Mayfield Road	Overall	E	59	0.99	F	148	1.39
	EBLL	E	66	0.91	F	354	1.64
	EBTTT	E	62	1.00	D	0.94	0.65
	EBR	C	30	0.23	C	23	0.32
	WBL	F	116	1.10	D	47	0.74
	WBTTT	D	49	0.88	F	379	1.70
	WBR	C	33	0.13	C	26	0.18
	NBLL	F	126	0.93	F	379	1.70
	NBTT	D	42	0.69	D	49	0.85
	NBR	C	33	0.14	C	31	0.11
	SBL	D	37	0.64	F	165	1.19
	SBTT	E	66	0.99	D	51	0.77
	SBR	D	36	0.44	F	169	1.25

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Countryside Drive	Overall	C	31	0.75	E	56	0.99
	EBL	D	44	0.01	F	84	0.95
	EBTT	D	49	0.30	D	48	0.89
	EBR	D	45	0.03	C	28	0.11
	WBL	D	40	0.72	D	40	0.72
	WBTT	C	31	0.13	E	71	1.02
	WBR	C	29	0.01	C	31	0.12
	NBL	C	27	0.56	D	37	0.59
	NBTTT	C	24	0.52	E	61	0.97
	NBR	C	23	0.37	D	37	0.33
	SBLL	E	59	0.25	F	89	0.62
	SBTTT-R	C	33	0.84	C	29	0.40
Dixie Road at Father Tobin Road	Overall	B	18	0.70	A	10	0.50
	EBL-T-R	C	29	0.11	C	28	0.14
	WBL-T-R	D	54	0.84	C	34	0.55
	NBL	B	16	0.33	A	6	0.08
	NBTTT	B	13	0.48	A	8	0.48
	NBR	B	12	0.30	A	6	0.01
	SBL	B	23	0.59	A	6	0.06
	SBTTT-R	B	15	0.62	A	7	0.26
Dixie Road at Octillo Boulevard	Overall	B	11	0.59	B	11	0.65
	WBL	D	45	0.62	D	38	0.58
	WBR	D	40	0.26	C	32	0.14
	NBTTT	A	8	0.49	A	9	0.48
	NBR	A	5	0.06	A	7	0.17
	SBL	B	15	0.53	C	26	0.67
	SBTTT	A	9	0.58	A	8	0.28
Dixie Road at Sandalwood Pkwy	Overall	F	95	1.17	F	123	1.36
	EBLL	F	90	0.99	F	266	1.43
	EBTTT	F	124	1.18	F	92	1.11
	EBR	D	42	0.78	C	25	0.29
	WBLL	F	206	1.29	F	325	1.54
	WBTTT	F	87	1.08	F	172	1.29
	WBR	C	31	0.37	C	25	0.15
	NBL	F	182	1.22	F	190	1.30
	NBTTT	D	48	0.83	E	55	0.92
	NBR	C	35	0.15	D	46	0.61
	SBL	F	141	1.12	F	151	1.19
	SBTTT	F	86	1.06	D	36	0.30
SBR	F	95	1.08	D	40	0.72	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Springtown Trail	Overall	A	6	0.54	A	5	0.48
	EBL	D	52	0.18	D	53	0.24
	EBT-R	D	52	0.30	D	51	0.13
	WBL-T	D	55	0.36	E	57	0.41
	WBR	D	49	0.01	D	50	0.01
	NBL	A	4	0.08	A	3	0.12
	NBTTT	A	3	0.36	A	4	0.48
	NBR	A	2	0.02	A	2	0.05
	SBL	A	3	0.03	A	4	0.10
	SBTTT	A	5	0.56	A	2	0.19
	SBR	A	2	0.01	A	2	0.02
Dixie Road at Peter Robertson Boulevard	Overall	C	32	0.86	C	27	0.73
	EBL	D	35	0.42	D	35	0.37
	EBTT-R	D	41	0.50	D	42	0.58
	WBL	F	118	1.10	D	46	0.72
	WBTT-R	D	42	0.61	D	41	0.56
	NBL	C	38	0.67	B	12	0.43
	NBTTT	C	21	0.50	C	25	0.80
	NBR	B	16	0.02	B	15	0.14
	SBL	B	13	0.21	C	22	0.43
	SBTTT	C	23	0.79	B	19	0.30
	SBR	B	12	0.05	B	16	0.02
Dixie Road at Bovaird Drive East	Overall	F	205	1.41	F	107	1.43
	EBLL	F	207	1.26	F	206	1.30
	EBTTT	F	355	1.70	D	43	0.92
	EBR	C	25	0.24	C	23	0.10
	WBLL	F	359	1.62	E	80	0.85
	WBTTT	F	148	1.24	F	162	1.27
	WBR	C	24	0.15	D	37	0.64
	NBL	D	43	0.56	C	33	0.49
	NBTTT	D	40	0.61	F	105	1.11
	NBR	C	34	0.08	C	34	0.15
	SBLL	F	363	1.65	F	304	1.50
	SBTTT	F	84	1.07	C	35	0.38
	SBR	C	32	0.35	C	32	0.10

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Northcliffe Street	Overall	A	8	0.57	A	6	0.42
	EBL	D	47	0.15	D	48	0.13
	EBT-R	D	51	0.41	D	48	0.13
	WBL	D	54	0.52	D	52	0.38
	WBT-R	D	56	0.02	D	48	0.13
	NBL	B	12	0.27	A	3	0.17
	NBTTT-R	A	4	0.24	A	4	0.42
	SBL	C	3	0.04	A	4	0.12
	SBTTT-R	A	6	0.58	A	3	0.24
Dixie Road at North Park Drive	Overall	C	22	0.69	C	28	0.68
	EBL	D	42	0.44	D	45	0.61
	EBTT-R	C	34	0.28	C	30	0.31
	WBL	D	46	0.60	C	35	0.41
	WBTT-R	D	37	0.46	C	32	0.43
	NBL	E	71	0.71	C	35	0.58
	NBTTT	B	15	0.29	C	30	0.71
	NBR	B	13	0.04	B	22	0.09
	SBL	B	13	0.38	D	42	0.75
SBTTT-R	B	18	0.73	B	14	0.32	
Dixie Road at Northampton Street	Overall	C	22	0.67	B	16	0.53
	EBL-T-R	D	38	0.27	D	42	0.21
	WBL-T-R	D	49	0.60	D	46	0.39
	NBL	C	22	0.24	A	8	0.33
	NBTTT	B	12	0.23	B	14	0.58
	NBR	B	11	0.04	A	9	0.12
	SBL	A	10	0.04	B	12	0.09
	SBTTT	C	22	0.78	B	14	0.32
	SBR	B	11	0.02	B	12	0.04
Dixie Road at Williams Pkwy	Overall	F	88	1.19	E	60	1.06
	EBL	C	22	0.35	F	175	1.42
	EBTT	F	157	1.25	D	36	0.65
	EBR	C	26	0.34	C	30	0.23
	WBL	F	246	1.41	C	29	0.68
	WBTT	C	31	0.66	F	84	1.07
	WBR	C	23	0.08	C	27	0.26
	NBL	F	121	0.87	D	35	0.77
	NBTTT	C	34	0.41	E	57	0.99
	NBR	C	30	0.10	C	28	0.20
	SBL	C	27	0.53	F	128	1.06
	SBTTT	E	73	1.06	D	40	0.55
SBR	C	25	0.22	D	36	0.19	

Intersections	Overall/Movement	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
Dixie Road at Howden Boulevard	Overall	C	25	0.75	C	26	0.80
	EBL	C	31	0.15	D	43	0.38
	EBTT-R	D	38	0.60	D	37	0.29
	WBL	D	46	0.52	E	59	0.75
	WBTT-R	C	32	0.30	D	41	0.55
	NBL	C	31	0.31	C	31	0.70
	NBTT-R	B	18	0.26	C	22	0.79
	SBL	B	12	0.24	E	72	0.87
	SBTT-R	C	23	0.83	B	10	0.33
Dixie Road at Queen Street East ⁽¹⁾	Overall	F	175	1.59	F	198	1.58
	EBL	C	31	0.42	F	260	1.45
	EBTTT	F	323	1.62	F	98	1.11
	EBR	C	33	0.33	D	37	0.59
	WBLL	F	206	1.28	F	211	1.30
	WBTTT	D	42	0.89	F	277	1.53
	WBR	C	24	0.06	C	26	0.21
	NBLL	F	150	1.05	F	209	1.31
	NBTTT	D	43	0.44	F	310	1.58
	NBR	D	40	0.11	D	39	0.39
	SBLL	D	53	0.68	F	146	1.08
	SBTTT	F	199	1.34	F	85	1.02
	SBR	C	34	0.44	D	42	0.12
Unsignalized Intersections							
Dixie Road at Lascelles Boulevard.	Average Delay	--	2	--	--	1	--
	EBL-R	E	46	0.66	B	14	0.16
	NBL	C	19	0.08	B	11	0.14
	NBTTT	A	0	0.15	A	0	0.44
	SBTTT	A	0	0.51	A	0	0.21
	SBR	A	0	0.03	A	0	0.03
Dixie Road at Hazelwood Road	Average Delay	--	1	--	--	1	--
	EBL-R	F	60	0.37	D	35	0.08
	NBL	C	18	0.02	B	11	0.03
	NBTTT	A	0	0.13	A	0	0.50
	SBTTT-R	A	0	0.63	A	0	0.29
Dixie Road at Hillside Drive	Average Delay	--	10	--	--	1	--
	EBL-R	F	423	1.48	E	40	0.45
	NBL	E	47	0.29	B	13	0.22
	NBTT	A	0	0.11	A	0	0.49
	SBTT-R	A	0	0.65	A	0	0.28

EBL= eastbound left, NBT= northbound through, WBL-T-R= westbound shared left-through-right, EBL-R, eastbound shared left-right

Note: (1) Subsequent traffic analysis has confirmed that the current Queen Street intersection configuration is sufficient to address the needs for the 2031 horizon year, without the addition of an additional westbound left turn lane.

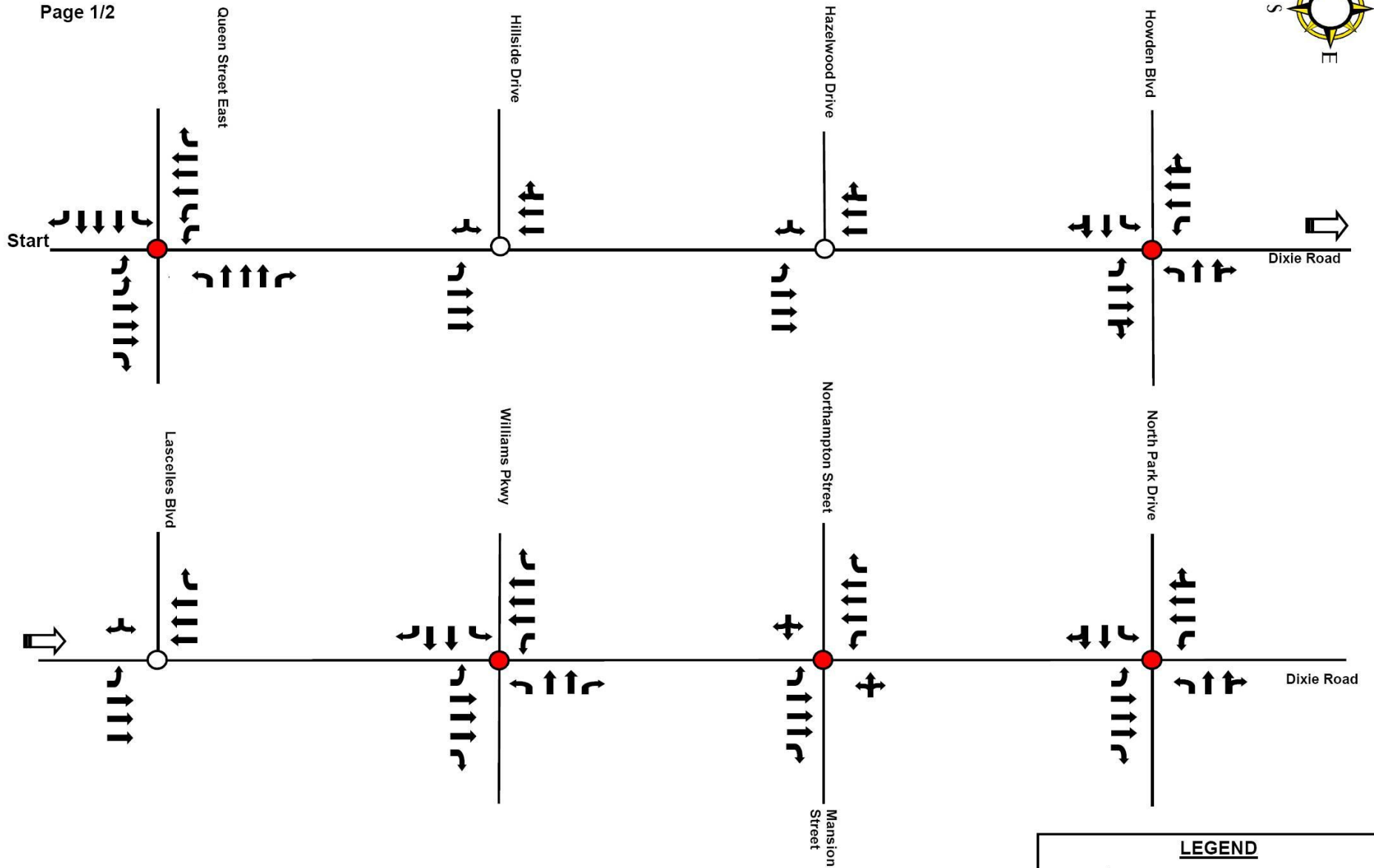
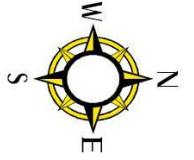
Table 22 indicates that traffic growth from 2021 horizon year to 2031 horizon year would moderately worsen the level of service at all study area intersections in both the AM and PM peak hours. All major intersections along Dixie Road will operate approaching or above theoretical capacity in both the, AM (southbound and eastbound directions and PM (northbound and westbound directions) peak hours.

The intersections of Dixie Road with Bovaird Drive East and Queen Street East have indicated the worst overall delays and volume to capacity ratios during both the AM and PM peak hours. The intersection of Dixie Road with Mayfield Road and Countryside Drive would be affected due to heavy east-west traffic volumes.

All three unsignalized intersections will operate at satisfactory level of service and except the Dixie Road at Hillside Drive intersection. The eastbound approach of this intersection has shown a substantial delay of approximately 423 seconds (about 7 minutes) per vehicle in the AM peak hour which is significant but the traffic signal warrant analysis presented in **Table 21** indicated that traffic signal are not warranted. This might be due to heavy traffic at southbound approach of the Dixie Road/Queen Street East intersection in the AM peak hour. The same approach of this intersection has shown only a delay of 135 seconds (slightly above two minutes) per vehicle in the horizon year of 2021. Therefore, it is recommended that operation of the Dixie Road/Hillside Drive intersection should be monitored beyond 2021 horizon year.

Figure 10 ~ 2031 Intersection Lane Configuration

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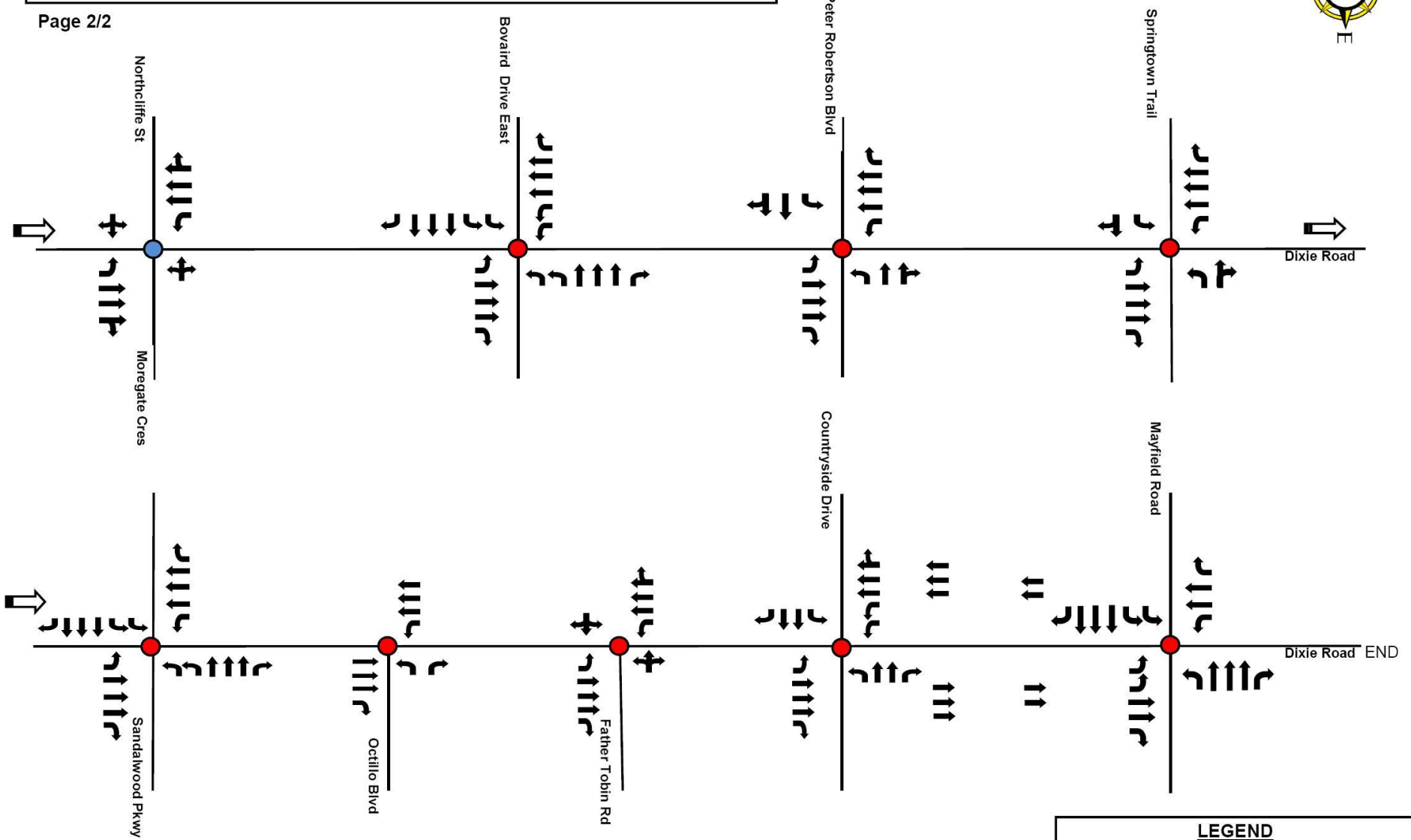
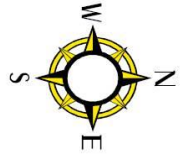
LEGEND

- Lane configuration
- Signalised Intersection
- Unsignalised Intersection



Not to Scale

Figure 10 ~ 2031 Intersection Lane Configuration



LEGEND

- Lane configuration
- Signalised Intersection
- Proposed Signalised Intersection



Not to Scale

4.6.3 2031 Future Queuing Analysis

In order to estimate turning lane storage length requirements at the study area intersections, queuing analyses were conducted using SimTraffic 7.0 software for the 2031 traffic volumes (**Figure 9**) and recommended future intersection lane configuration (**Figure 10**). A summary of 95th queue lengths for the left and right turn lanes at the study area intersections is presented in **Table 23**. Details of the queue length analysis are provided in **Appendix L**.

Table 23 ~ 2031 Future Traffic Queuing Summary

Intersections	Overall/ Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
Signalized			
Dixie Road at Mayfield Road	EBLL*	202	195
	EBR	184	92
	WBL	173	113
	WBR	58	120
	NBLL*	25	160
	NBR	49	23
	SBL	182	117
	SBR	73	100
Dixie Road at Countryside Drive	EBL	3	109
	EBR	16	86
	WBL	107	149
	WBR	10	118
	NBL	38	81
	NBR	54	63
	SBLL*	9	183
Dixie Road at Father Tobin Road	NBL	19	10
	NBR	30	5
	SBL	31	6
Dixie Road at Octillo Boulevard	WBL	57	61
	WBR	19	56
	NBR	23	35
	SBL	--	41
Dixie Road at Sandalwood Pkwy	EBLL*	130	123
	EBR	109	78
	WBLL*	102	110
	WBR	86	76
	NBL	151	120
	NBR	61	84
	SBL	122	129
SBR	136	74	

Intersections	Overall/ Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
Dixie Road at Springtown Trail	EBL	16	24
	NBL	7	83
	NBR	20	49
	SBL	6	10
	SBR	12	5
Dixie Road at Peter Robertson Boulevard	EBL	43	69
	WBL	87	73
	NBL	43	85
	NBR	10	78
	SBL	69	23
Dixie Road at Bovaird Drive East	SBR	39	11
	EBLL*	112	186
	EBR	216	39
	WBLL*	166	108
	WBR	184	209
	NBL	27	43
	NBR	45	89
SBL	151	152	
Dixie Road at Northcliffe Street	SBR	118	41
	EBL	23	12
	WBL	34	24
	NBL	14	23
Dixie Road at North Park Drive	SBL	8	13
	EBL	43	70
	WBL	106	48
	NBL	26	37
	NBR	32	60
Dixie Road at Northampton Street	SBL	28	44
	NBL	24	31
	NBR	21	47
	SBL	23	66
Dixie Road at Williams Pkwy	SBR	14	38
	EBL	73	85
	EBR	94	51
	WBL	80	94
	WBR	43	101
	NBL	64	56
	NBR	29	63
SBL	98	120	
Dixie Road at Howden Boulevard	SBR	52	51
	EBL	22	30
	WBL	56	98
	NBL	13	38
Dixie Road at Howden Boulevard	SBL	27	31

Intersections	Overall/ Movement	AM Peak Hour	PM Peak Hour
		95 th Percentile Queue length (m)	95 th Percentile Queue length (m)
Dixie Road at Queen Street East ⁽¹⁾	EBL	225	199
	EBR	263	257
	WBLL*	263	225
	WBR	---	313
	NBLL*	59	133
	NBR	27	241
	SBLL*	78	72
	SBR	217	68
Unsignalized			
Dixie Road at Lascelles Boulevard.	NBL	12	17
	SBR	1	4
Dixie Road at Hazelwood Road	NBL	7	8
Dixie Road at Hillside Drive	NBL	23	27

*averaged 95th percentile queue length for the double left turn lane

Note: (1) Subsequent traffic analysis has confirmed that the current Queen Street intersection configuration is sufficient to address the needs for the 2031 horizon year, without the addition of an additional westbound left turn lane.

Table 23 presents 95th percentile queue lengths for the right and left turn movements for both the AM and PM peak hours. The critical 95th percentile queue lengths from the AM and PM peak hours, shown in bold, are recommended for storage length requirements. At some movements queue lengths are longer than the 2021 horizon year due to increased traffic volume. In the AM peak hour, estimated 95th percentile queue length of 210 metres for the southbound right turn lane at the intersection of Dixie Road at Queen Street East would obstruct the Hillside Drive traffic resulting longer delays at this intersection.

5. Summary of Conclusions

The traffic analyses presented in this report provides the following conclusions:

5.1 Mid-Block Link Volumes to Capacity Assessment

Existing Conditions

1. A section of Dixie Road between south of Williams Pkwy and south of Hazelwood Drive is approaching to capacity in the AM Peak hour;
2. In the PM peak hour, Dixie Road is approaching to capacity between north of Howden Boulevard and north of Hillside Drive;
3. The remaining sections in the study area along Dixie Road are operating below capacity in both, the AM and PM peak hours and there is sufficient residual capacity;

2021 Horizon Year

4. Without the Dixie Road Improvements, southbound traffic demand will significantly exceed the available capacity from north of Mayfield Road to north of Hillside Drive and approaching to capacity to north and south of Queen Street East in the AM peak hour (southbound);
5. In the PM peak hour (northbound), Dixie Road will be approaching to capacity or above capacity from north of Springtown Trail to south of Queen Street East;
6. With the Dixie Road widened to 6-lane cross section from north of Queen Street to Countryside Drive and 4-lane cross-section from north of Countryside Drive to north of Mayfield Road, sufficient capacity will be available in the study area in both, the AM and PM peak hours with the exceptions of the following sections along Dixie Road:
 - North of Howden Boulevard to south of Queen Street East– approaching to capacity in the AM peak hour;
 - South of Howden Boulevard and south of Queen Street East in the PM peak hour;
7. The volume to capacity assessment indicated a sufficient residual capacity for the Dixie Road section between Countryside Drive and Mayfield Road;
8. An interpolation suggests that Dixie Road is needed to be widened to six lanes between Countryside Drive and Queen Street East and four lane cross-section between Countryside Drive and north of Mayfield Road by 2016 in order to accommodate continuing growth in the traffic volumes in the study area;

2031 Horizon Year

9. Dixie Road with improvements (six lanes up to Countryside Drive and four lanes up to north of Mayfield Road) will operate by the horizon year of 2031 as following:
 - Between north of Sandalwood Pkwy and south of Queen Street East – approaching or above capacity in the AM peak hour;
 - Between south of Lascelles Boulevard and south of Queen Street East - approaching to capacity in the PM peak hour;
 - A section between Peter Robertson Boulevard and Bovaird Drive East – approaching to capacity in the PM peak hour;
 - A 4-lane section between Countryside Drive and north of Mayfield Road – approaching to capacity in both the AM and PM peak hours;

10. The 4-lane section of Dixie Road from Countryside Drive to north of Mayfield Road will start approaching to capacity by the horizon year of 2031 and would require monitoring beyond 2031 year;

5.2 Traffic Operations

Existing Conditions

11. Existing traffic operation analysis indicates that all signalized and unsignalized study area intersections along Dixie Road are currently operating at acceptable level of service "D" or better;

2021 Horizon year

12. Without improvements to Dixie Road, intersection level of service will be deteriorated with significant delays and capacity deficiencies in the southbound in the AM peak hour and northbound in the PM peak hour;
13. In the east-west direction, almost all major crossing roadways to Dixie Road will experience longer delays and capacity deficiencies in the eastbound during the AM peak hour and westbound during the PM peak hour;
14. The eastbound approach of the unsignalized intersection of Dixie Road and Northcliffe Street will experience a delay of 220 seconds (about 4 minutes) per vehicle in the morning peak hour;
15. Left turn lane warrant analysis for the unsignalized intersection of Dixie Road with Northcliffe Street dictates requirements of separate left turn lanes at the northbound and southbound approaches;
16. Traffic signal warrants are not for the unsignalized intersections of Dixie Road with Northcliffe Street, Lascelles Boulevard, Hazelwood Drive and Hillside Drive;
17. The Dixie Road improvements and recommended intersection lane configurations would improve the overall level of service at all the study area intersections, southbound in the AM peak hour and northbound in the PM peak hour and also individual movements in both the AM and PM peak hours;
18. The intersection of Dixie Road with Mayfield Road will operate at satisfactory level of service "D" in both the AM and PM peak hours;
19. The Dixie Road improvements would also help to improve delay and capacity deficiency at the minor roadways of the unsignalized intersections due to improved flow of thru traffic along Dixie Road;
20. Recommended intersection improvements in this report by year 2021 in conjunction with planned intersection improvements are summarized as follows:

- **Dixie Road at Mayfield Road:** eastbound approach – additional left turn lane, westbound approach – an exclusive right turn lane, additional one northbound and one southbound through lanes;
- **Dixie Road at Countryside Drive:** eastbound approach – an exclusive right turn lane, additional through lane and exclusive left turn lane, westbound approach – an exclusive right turn lane, additional through lane and exclusive left turn lane; northbound approach – additional one through lane and exclusive right turn lane, southbound approach – additional two through lanes
- **Dixie Road at Father Tobin Road:** northbound approach – additional one through lane and a left turn lane, southbound approach – additional one through lane
- **Dixie Road at Octillo Boulevard:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Sandalwood Pkwy:** eastbound approach – additional left turn lane, i.e. double left turn lanes and an exclusive right turn lane, westbound approach – additional left turn lane, i.e. double left turn lanes and an exclusive right turn lane, northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Springtown Trail:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Peter Robertson Boulevard:** northbound approach – additional one through lane, southbound approach – additional one through lane

- **Dixie Road at Bovaird Drive East:** eastbound approach – additional left turn lane, i.e. double left turn lanes, westbound approach – additional left turn lane, i.e. double left turn lanes, northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Northcliffe Street / Moregate Crescent:** northbound approach – additional one through lane and a left turn lane, southbound approach – additional one through lane with shared right lane and a left turn lane; and
- **Dixie Road at North Park Drive:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Northampton Street/ Mansion Street:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at William Pkwy:** eastbound approach – an exclusive right turn lane, westbound approach – an exclusive right turn lane, northbound approach – additional one through lane and an exclusive right turn, southbound approach - additional one through lane
- **Dixie Road at Lascelles Boulevard:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Howden Boulevard:** northbound approach – additional one through lane, southbound approach – additional one through lane
- **Dixie Road at Hazelwood Drive:** northbound approach – additional one through lane, southbound approach – additional one through lane

2031 Horizon Year

21. Traffic signal warrants are met at the Dixie Road/Northcliffe Street intersection;
22. Traffic signal warrants are not for the unsignalized intersections of Dixie Road with Lascelles Boulevard, Hazelwood Drive and Hillside Drive;
23. Traffic operational analyses recommended additional left turn lanes requirements at the intersections of Dixie Road with Mayfield Road (northbound left turn lane), Countryside Drive (southbound left turn lane) and Bovaird Drive East (southbound left turn lane);
24. The traffic growth from 2021 horizon year to 2031 horizon year would moderately worsen the level of service at all study area intersections in both the AM and PM peak hours.
25. All major intersections along Dixie Road will operate approaching or above theoretical capacity in both, the AM (southbound and eastbound directions and PM (northbound and westbound directions) peak hours;
26. The intersections of Dixie Road with Bovaird Drive East and Queen Street East have indicated the worst overall delays and volume to capacity ratios during both the AM and PM peak hours;
27. The intersection of Dixie Road with Mayfield Road and Countryside Drive would be affected due to heavy east-west traffic volumes;
28. All three unsignalized intersections will operate at satisfactory level of service except the Dixie Road at Hillside Drive intersection. The eastbound approach of this intersection has shown a delay of approximately 423 seconds (about 7 minutes) per vehicle which is significant but the traffic signal warrant analysis indicated that traffic signal are not warranted;
29. In the AM peak hour, longer queues at the southbound approach of the Dixie Road/Queen Street intersection would obstruct the Hillside Drive traffic resulting in longer delays at this intersection;
30. It is recommended that operations of the Dixie Road/Hillside Drive intersection should be monitored beyond 2021 horizon year; and
31. Recommended additional intersection improvements by year 2031 are summarized as follows:
 - **Dixie Road/Mayfield Road** – An additional northbound left turn lane, i.e. dual left-turn lanes
 - **Dixie Road/Countryside Road** – An additional southbound left turn lane, i.e. dual left-turn lanes
 - **Dixie Road/Bovaird Drive** – An additional southbound left turn lane, i.e. dual left-turn lanes; and
 - **Dixie Road/Northcliffe Street** – Traffic signal was introduced based on the traffic signal warrant analysis presented in the previous section.

In future, it is clear that transit will have to play a larger role and would hope to see some changes in trip distribution taking place. Improvements to the adjacent north-south corridors widened to 6 six lanes by 2021 could potentially direct some of the traffic away from Dixie Road which might overcome the capacity deficiencies predicted by the horizon year of 2031.

It is recommended that Dixie Road be widened: from 4-lane to 6-lane cross-section form Queen Street East northerly to Countryside Drive and from 2-lane to 4-lane cross-section from Countryside Drive to north of Mayfield Road by 2016. Those recommendations would be valid until 2031. Beyond 2031 year, the section of Dixie Road between Countryside Drive and north of Mayfield Road will require monitoring.

Appendices

Appendix A

Existing Intersection Turning Movement Counts &
MTO Seasonal Variation Curve

Ontario Traffic Inc

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 8:00:00

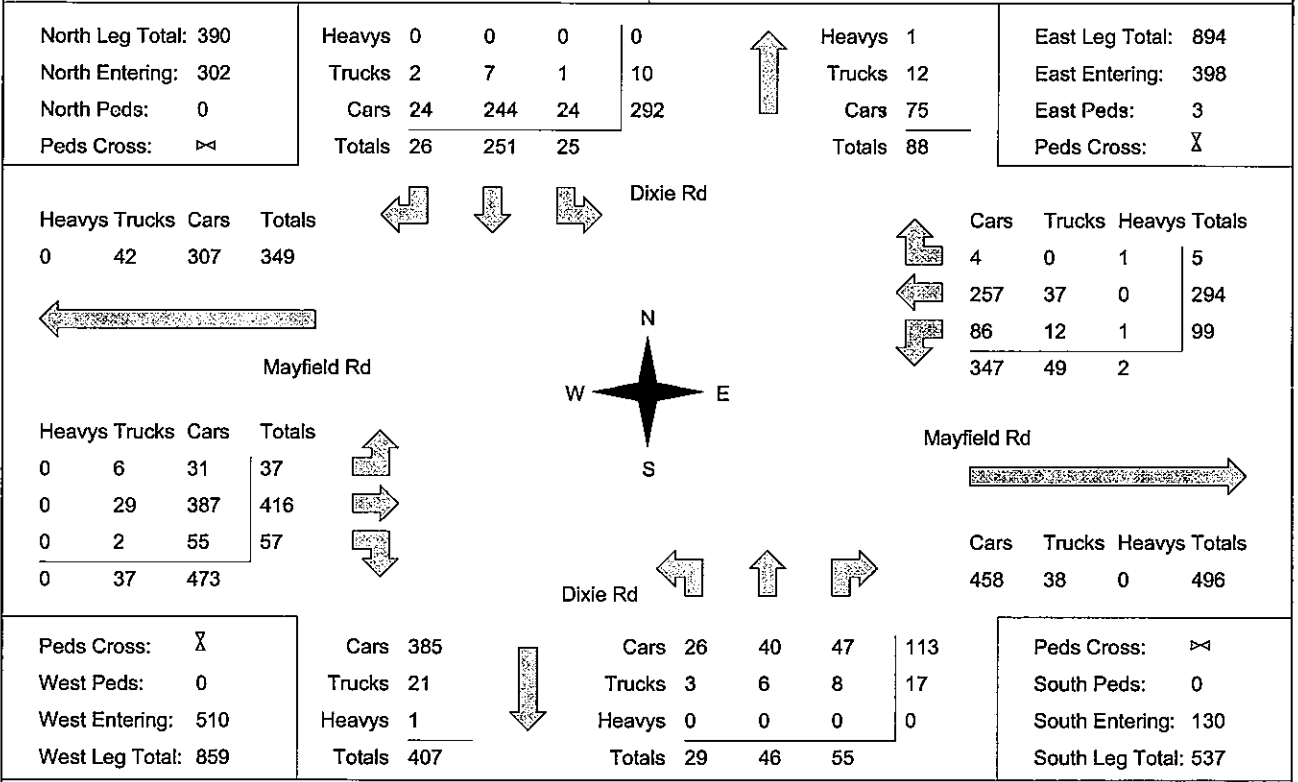
To: 9:00:00

Municipality: Region of Peel
Site #: 0042752605
Intersection: Dixie Rd & Mayfield Rd
TFR File #: 3
Count date: 13-Nov-07

Weather conditions:
Person(s) who counted:

** Signalized Intersection **

Major Road: Dixie Rd runs N/S



Comments

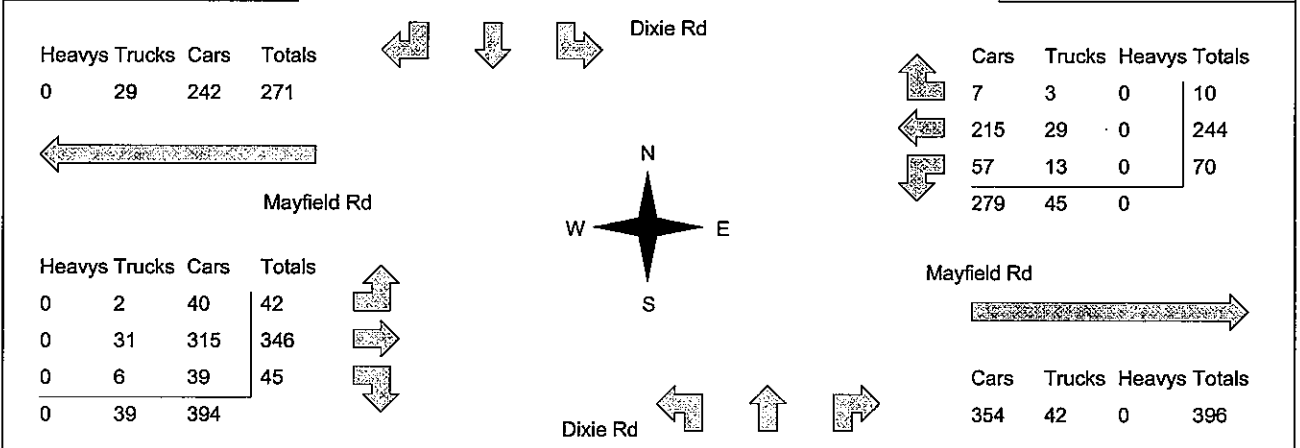
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 11:30:00 To: 12:30:00
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Municipality: Region of Peel Site #: 0042752605 Intersection: Dixie Rd & Mayfield Rd TFR File #: 3 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 203 North Entering: 107 North Peds: 0 Peds Cross: 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>11</td><td>1</td><td>12</td></tr> <tr><td>Cars</td><td>11</td><td>82</td><td>2</td><td>96</td></tr> <tr><td>Totals</td><td>11</td><td>93</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	11	1	12	Cars	11	82	2	96	Totals	11	93	3		↑	Heavys 0 Trucks 9 Cars 87 Totals 96	East Leg Total: 720 East Entering: 324 East Peds: 5 Peds Cross: 8
Heavys	0	0	0	0																				
Trucks	0	11	1	12																				
Cars	11	82	2	96																				
Totals	11	93	3																					



Comments

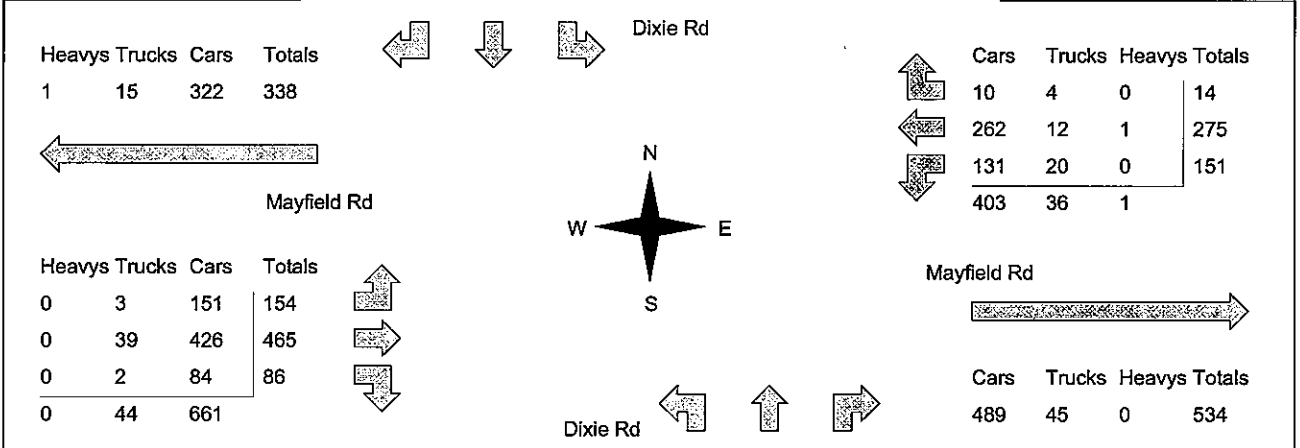
Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:30:00 To: 17:30:00
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Municipality: Region of Peel Site #: 0042752605 Intersection: Dixie Rd & Mayfield Rd TFR File #: 3 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 585 North Entering: 100 North Peds: 0 Peds Cross: ☒	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>3</td><td>1</td><td>4</td></tr> <tr><td>Cars</td><td>5</td><td>79</td><td>12</td><td>96</td></tr> <tr><td>Totals</td><td>5</td><td>82</td><td>13</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	3	1	4	Cars	5	79	12	96	Totals	5	82	13		↑	Heavys 1 Trucks 11 Cars 473 Totals 485	East Leg Total: 974 East Entering: 440 East Peds: 1 Peds Cross: ☒
Heavys	0	0	0	0																				
Trucks	0	3	1	4																				
Cars	5	79	12	96																				
Totals	5	82	13																					



Peds Cross: ☒ West Peds: 0 West Entering: 705 West Leg Total: 1043	Cars 294 Trucks 25 Heavys 0 Totals 319	↓	Cars 55 312 51 418 Trucks 3 4 5 12 Heavys 0 1 0 1 Totals 58 317 56	Peds Cross: ☒ South Peds: 0 South Entering: 431 South Leg Total: 750
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Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Region of Peel
Site #: 0042752605
Intersection: Dixie Rd & Mayfield Rd
TFR File #: 3
Count date: 13-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 2727 North Entering: 1089 North Peds: 0 Peds Cross: ><	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>12</td><td>61</td><td>15</td><td>88</td></tr> <tr><td>Cars</td><td>69</td><td>853</td><td>79</td><td>1001</td></tr> <tr><td>Totals</td><td>81</td><td>914</td><td>94</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	12	61	15	88	Cars	69	853	79	1001	Totals	81	914	94			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>4</td></tr> <tr><td>Trucks</td><td>98</td></tr> <tr><td>Cars</td><td>1536</td></tr> <tr><td>Totals</td><td>1638</td></tr> </table>	Heavys	4	Trucks	98	Cars	1536	Totals	1638	East Leg Total: 6175 East Entering: 2872 East Peds: 10 Peds Cross: X																																																																																	
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Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Mayfield Rd

Count Date: 13-Nov-07

Municipality: Region of Peel

North Approach Totals						South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	19	94	7	120	0	274	8:00:00	56	40	58	154	1
9:00:00	25	251	26	302	0	432	9:00:00	29	46	55	130	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	6	82	12	100	0	203	12:00:00	14	44	45	103	0
13:00:00	3	98	10	111	0	208	13:00:00	20	40	37	97	0
14:00:00	11	95	5	111	0	227	14:00:00	27	48	41	116	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	10	71	9	90	0	354	16:00:00	47	156	61	264	1
17:00:00	7	108	1	116	0	528	17:00:00	58	292	62	412	0
18:00:00	13	115	11	139	0	501	18:00:00	54	249	59	362	0
Totals:	94	914	81	1089	0	2727		305	915	418	1638	2
East Approach Totals						West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	61	312	7	380	0	758	8:00:00	10	315	53	378	0
9:00:00	99	294	5	398	3	908	9:00:00	37	416	57	510	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	72	194	7	273	4	642	12:00:00	40	298	31	369	0
13:00:00	68	218	9	295	1	622	13:00:00	26	262	39	327	0
14:00:00	54	212	8	274	0	663	14:00:00	43	303	43	389	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	90	261	13	364	1	917	16:00:00	168	348	37	553	0
17:00:00	132	278	18	428	0	1113	17:00:00	206	401	78	685	0
18:00:00	151	297	12	460	1	1114	18:00:00	114	448	92	654	0
Totals:	727	2066	79	2872	10	6737		644	2791	430	3865	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	387	552	410	356		400	607	739	713			

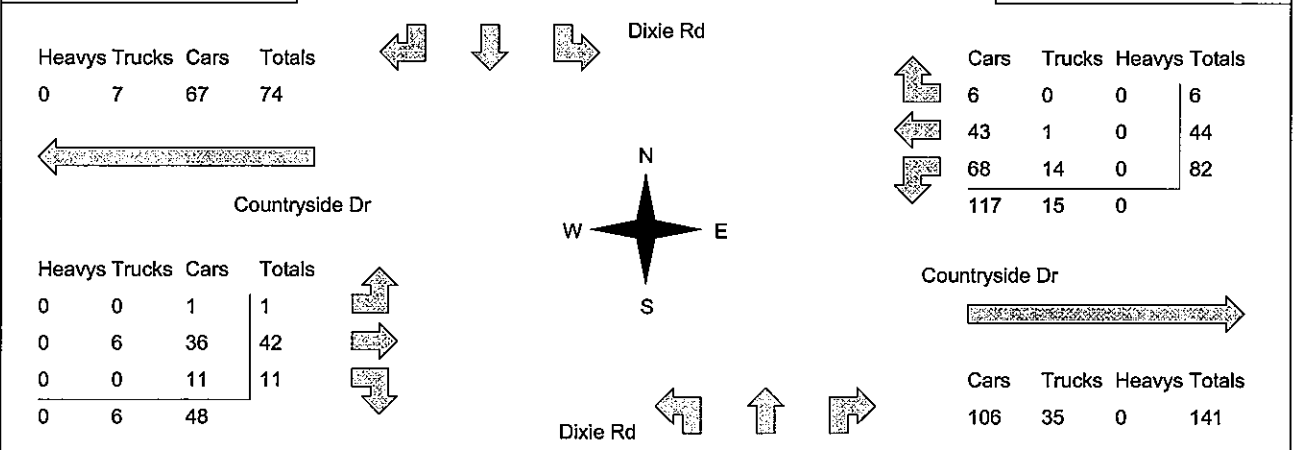
Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 8:00:00 To: 9:00:00
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Municipality: Region of Peel Site #: 0042628105 Intersection: Dixie Rd & Countryside Dr TFR File #: 2 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 594 North Entering: 324 North Peds: 0 Peds Cross: ><	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>2</td><td>67</td><td>0</td><td>69</td></tr> <tr><td>Cars</td><td>6</td><td>236</td><td>13</td><td>255</td></tr> <tr><td>Totals</td><td>8</td><td>303</td><td>13</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	2	67	0	69	Cars	6	236	13	255	Totals	8	303	13		↑	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>55</td></tr> <tr><td>Cars</td><td>215</td></tr> <tr><td>Totals</td><td>270</td></tr> </table>	Heavys	0	Trucks	55	Cars	215	Totals	270	East Leg Total: 273 East Entering: 132 East Peds: 0 Peds Cross: X
Heavys	0	0	0	0																												
Trucks	2	67	0	69																												
Cars	6	236	13	255																												
Totals	8	303	13																													
Heavys	0																															
Trucks	55																															
Cars	215																															
Totals	270																															



Peds Cross: X West Peds: 0 West Entering: 54 West Leg Total: 128	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>315</td></tr> <tr><td>Trucks</td><td>81</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>396</td></tr> </table>	Cars	315	Trucks	81	Heavys	0	Totals	396	↓	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>18</td><td>208</td><td>57</td><td>283</td></tr> <tr><td>Trucks</td><td>4</td><td>55</td><td>29</td><td>88</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>22</td><td>263</td><td>86</td><td></td></tr> </table>	Cars	18	208	57	283	Trucks	4	55	29	88	Heavys	0	0	0	0	Totals	22	263	86		Peds Cross: >< South Peds: 0 South Entering: 371 South Leg Total: 767
Cars	315																															
Trucks	81																															
Heavys	0																															
Totals	396																															
Cars	18	208	57	283																												
Trucks	4	55	29	88																												
Heavys	0	0	0	0																												
Totals	22	263	86																													

Comments

Ontario Traffic Inc

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 13:00:00

To: 14:00:00

Municipality: Region of Peel
Site #: 0042628105
Intersection: Dixie Rd & Countryside Dr
TFR File #: 2
Count date: 13-Nov-07

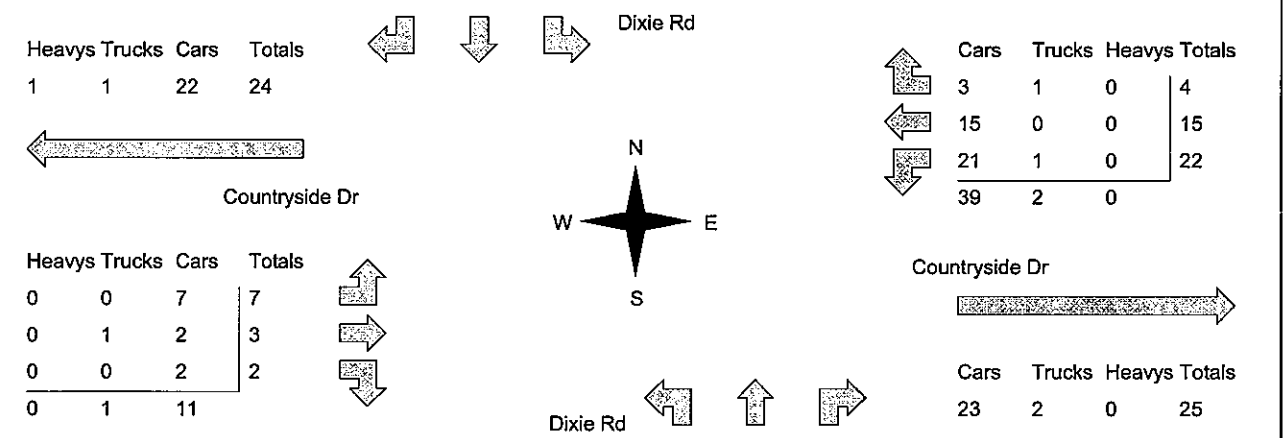
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 257 North Entering: 146 North Peds: 0 Peds Cross: ><	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>23</td><td>1</td><td>25</td></tr> <tr><td>Cars</td><td>5</td><td>114</td><td>2</td><td>121</td></tr> <tr><td>Totals</td><td>6</td><td>137</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	23	1	25	Cars	5	114	2	121	Totals	6	137	3		↑	Heavys 0 Trucks 22 Cars 89 Totals 111	East Leg Total: 66 East Entering: 41 East Peds: 1 Peds Cross: X
Heavys	0	0	0	0																				
Trucks	1	23	1	25																				
Cars	5	114	2	121																				
Totals	6	137	3																					



Peds Cross: X West Peds: 1 West Entering: 12 West Leg Total: 36	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>137</td></tr> <tr><td>Trucks</td><td>24</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>161</td></tr> </table>	Cars	137	Trucks	24	Heavys	0	Totals	161	↓	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>2</td><td>79</td><td>19</td><td>100</td></tr> <tr><td>Trucks</td><td>0</td><td>21</td><td>0</td><td>21</td></tr> <tr><td>Heavys</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>Totals</td><td>3</td><td>100</td><td>19</td><td></td></tr> </table>	Cars	2	79	19	100	Trucks	0	21	0	21	Heavys	1	0	0	1	Totals	3	100	19		Peds Cross: >< South Peds: 0 South Entering: 122 South Leg Total: 283
Cars	137																															
Trucks	24																															
Heavys	0																															
Totals	161																															
Cars	2	79	19	100																												
Trucks	0	21	0	21																												
Heavys	1	0	0	1																												
Totals	3	100	19																													

Comments

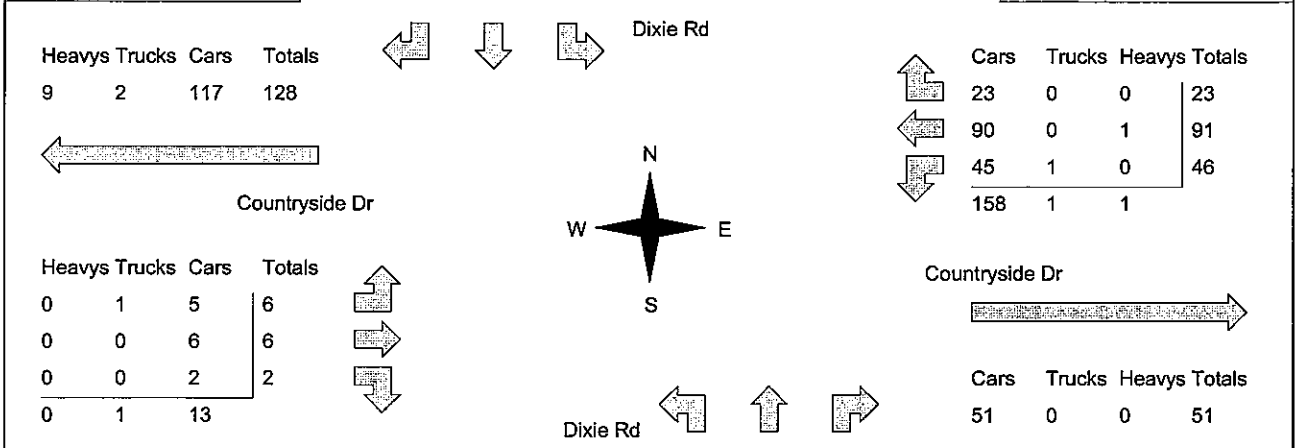
Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:45:00 To: 17:45:00
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Municipality: Region of Peel Site #: 0042628105 Intersection: Dixie Rd & Countryside Dr TFR File #: 2 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 722 North Entering: 320 North Peds: 0 Peds Cross: ∞	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>8</td><td>0</td><td>0</td><td>8</td></tr> <tr><td>Trucks</td><td>2</td><td>20</td><td>0</td><td>22</td></tr> <tr><td>Cars</td><td>19</td><td>267</td><td>4</td><td>290</td></tr> <tr><td>Totals</td><td>29</td><td>287</td><td>4</td><td></td></tr> </table>	Heavys	8	0	0	8	Trucks	2	20	0	22	Cars	19	267	4	290	Totals	29	287	4			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>20</td></tr> <tr><td>Cars</td><td>382</td></tr> <tr><td>Totals</td><td>402</td></tr> </table>	Heavys	0	Trucks	20	Cars	382	Totals	402	East Leg Total: 211 East Entering: 160 East Peds: 0 Peds Cross: ∞
Heavys	8	0	0	8																												
Trucks	2	20	0	22																												
Cars	19	267	4	290																												
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Cars	382																															
Totals	402																															



Peds Cross: ∞ West Peds: 0 West Entering: 14 West Leg Total: 142	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>314</td></tr> <tr><td>Trucks</td><td>21</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>335</td></tr> </table>	Cars	314	Trucks	21	Heavys	0	Totals	335		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>8</td><td>354</td><td>41</td><td>403</td></tr> <tr><td>Trucks</td><td>0</td><td>19</td><td>0</td><td>19</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>8</td><td>373</td><td>41</td><td></td></tr> </table>	Cars	8	354	41	403	Trucks	0	19	0	19	Heavys	0	0	0	0	Totals	8	373	41		Peds Cross: ∞ South Peds: 0 South Entering: 422 South Leg Total: 757
Cars	314																															
Trucks	21																															
Heavys	0																															
Totals	335																															
Cars	8	354	41	403																												
Trucks	0	19	0	19																												
Heavys	0	0	0	0																												
Totals	8	373	41																													

Comments

Ontario Traffic Inc

Total Count Diagram

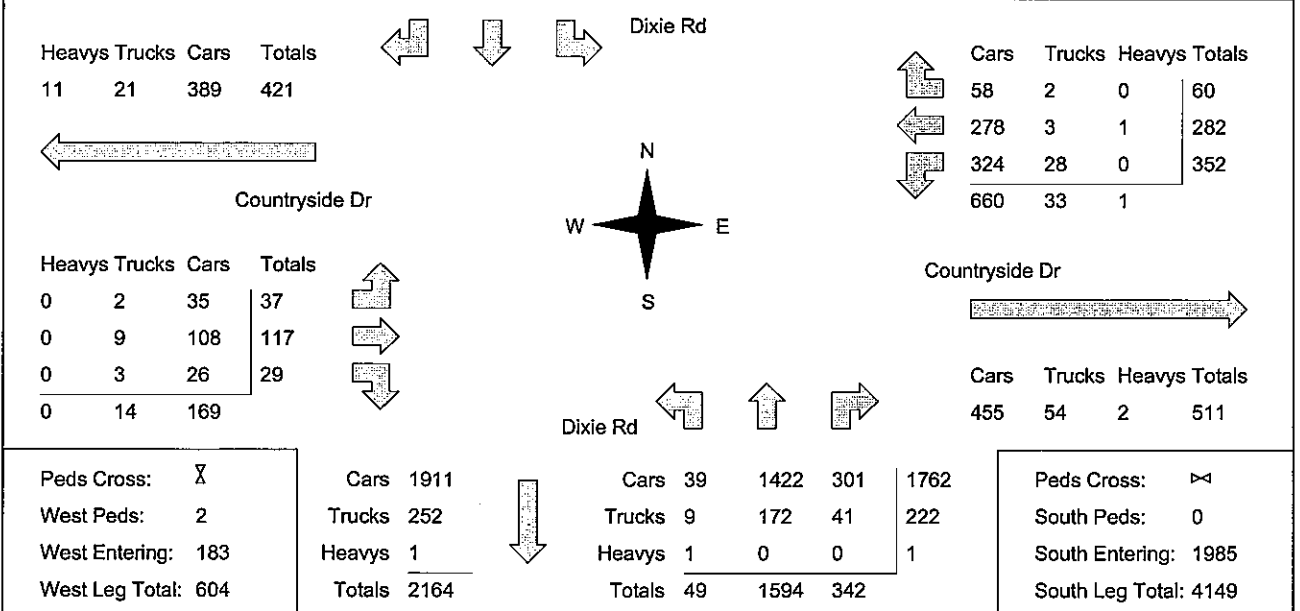
Municipality: Region of Peel
Site #: 0042628105
Intersection: Dixie Rd & Countryside Dr
TFR File #: 2
Count date: 13-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 3616 North Entering: 1925 North Peds: 0 Peds Cross: ><	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>9</td><td>1</td><td>2</td><td>12</td></tr> <tr> <td>Trucks</td><td>9</td><td>221</td><td>4</td><td>234</td></tr> <tr> <td>Cars</td><td>72</td><td>1561</td><td>46</td><td>1679</td></tr> <tr> <td>Totals</td><td>90</td><td>1783</td><td>52</td><td></td></tr> </table>	Heavys	9	1	2	12	Trucks	9	221	4	234	Cars	72	1561	46	1679	Totals	90	1783	52			Heavys 0 Trucks 176 Cars 1515 Totals 1691	East Leg Total: 1205 East Entering: 694 East Peds: 2 Peds Cross: X
Heavys	9	1	2	12																				
Trucks	9	221	4	234																				
Cars	72	1561	46	1679																				
Totals	90	1783	52																					



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Countryside Dr					Count Date: 13-Nov-07		Municipality: Region of Peel					
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	16	362	3	381	0	583	8:00:00	6	128	68	202	0
9:00:00	13	303	8	324	0	695	9:00:00	22	263	86	371	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	1	133	5	139	0	255	12:00:00	2	95	19	116	0
13:00:00	2	108	3	113	0	215	13:00:00	1	88	13	102	0
14:00:00	3	137	6	146	0	268	14:00:00	3	100	19	122	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	4	189	7	200	0	491	16:00:00	2	243	46	291	0
17:00:00	6	271	25	302	0	687	17:00:00	6	333	46	385	0
18:00:00	7	280	33	320	0	716	18:00:00	7	344	45	396	0
Totals:	52	1783	90	1925	0	3910		49	1594	342	1985	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	83	25	1	109	0	147	8:00:00	2	31	5	38	0
9:00:00	82	44	6	132	0	186	9:00:00	1	42	11	54	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	22	4	0	26	0	42	12:00:00	6	7	3	16	0
13:00:00	13	12	2	27	0	37	13:00:00	4	5	1	10	1
14:00:00	22	15	4	41	1	53	14:00:00	7	3	2	12	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	40	33	10	83	1	103	16:00:00	8	9	3	20	0
17:00:00	45	73	16	134	0	156	17:00:00	6	14	2	22	0
18:00:00	45	76	21	142	0	153	18:00:00	3	6	2	11	0
Totals:	352	282	60	694	2	877		37	117	29	183	2
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00			14:00	16:00	17:00	18:00		
Crossing Values:	116	127	35	29			44	81	124	124		

Ontario 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: Brampton
Site #: 0042530200
Intersection: Dixie Rd & Father Tobin Rd
TFR File #: 4
Count date: 6-Feb-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 1035
 North Entering: 701
 North Peds: 1
 Peds Cross: \times

Heavys	0	0	0
Trucks	29	3	32
Cars	623	46	669
Totals	652	49	

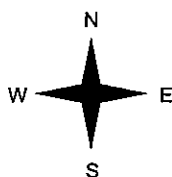


Heavys	0
Trucks	21
Cars	313
Totals	334

East Leg Total: 494
 East Entering: 208
 East Peds: 1
 Peds Cross: \times



Dixie Rd



Cars	Trucks	Heavys	Totals
9	1	0	10
191	7	0	198
200	8	0	

Father Tobin Rd



Dixie Rd



Cars	Trucks	Heavys	Totals
265	21	0	286

Cars	814
Trucks	36
Heavys	0
Totals	850



Cars	304	219	523
Trucks	20	18	38
Heavys	0	0	0
Totals	324	237	

Peds Cross: \times
 South Peds: 1
 South Entering: 561
 South Leg Total: 1411

Comments

Ontario Traffic Inc.

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
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Municipality: Brampton Site #: 0042530200 Intersection: Dixie Rd & Father Tobin Rd TFR File #: 4 Count date: 6-Feb-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 277 North Entering: 140 North Peds: 0 Peds Cross: ><	<table border="1" style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>17</td><td>0</td><td>17</td></tr> <tr><td>Cars</td><td>120</td><td>3</td><td>123</td></tr> <tr><td>Totals</td><td>137</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	Trucks	17	0	17	Cars	120	3	123	Totals	137	3		<table border="1" style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>7</td></tr> <tr><td>Cars</td><td>130</td></tr> <tr><td>Totals</td><td>137</td></tr> </table>	Heavys	0	Trucks	7	Cars	130	Totals	137	East Leg Total: 66 East Entering: 50 East Peds: 0 Peds Cross: X											
Heavys	0	0	0																																			
Trucks	17	0	17																																			
Cars	120	3	123																																			
Totals	137	3																																				
Heavys	0																																					
Trucks	7																																					
Cars	130																																					
Totals	137																																					
<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>167</td></tr> <tr><td>Trucks</td><td>18</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>185</td></tr> </table>		Cars	167	Trucks	18	Heavys	0	Totals	185	<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>128</td><td>12</td><td>140</td></tr> <tr><td>Trucks</td><td>7</td><td>1</td><td>8</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>135</td><td>13</td><td></td></tr> </table>		Cars	128	12	140	Trucks	7	1	8	Heavys	0	0	0	Totals	135	13												
Cars	167																																					
Trucks	18																																					
Heavys	0																																					
Totals	185																																					
Cars	128	12	140																																			
Trucks	7	1	8																																			
Heavys	0	0	0																																			
Totals	135	13																																				
<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>2</td><td>0</td><td>0</td><td>2</td></tr> <tr><td>Trucks</td><td>47</td><td>1</td><td>0</td><td>48</td></tr> <tr><td>Heavys</td><td>49</td><td>1</td><td>0</td><td></td></tr> </table> <p style="text-align: center;">Father Tobin Rd</p> <table border="1" style="margin: auto;"> <tr><td>Cars</td><td>15</td><td>1</td><td>0</td><td>16</td></tr> <tr><td>Trucks</td><td></td><td></td><td></td><td></td></tr> <tr><td>Heavys</td><td></td><td></td><td></td><td></td></tr> <tr><td>Totals</td><td></td><td></td><td></td><td></td></tr> </table>				Cars	2	0	0	2	Trucks	47	1	0	48	Heavys	49	1	0		Cars	15	1	0	16	Trucks					Heavys					Totals				
Cars	2	0	0	2																																		
Trucks	47	1	0	48																																		
Heavys	49	1	0																																			
Cars	15	1	0	16																																		
Trucks																																						
Heavys																																						
Totals																																						
<table border="1" style="margin: auto;"> <tr><td>Peds Cross:</td><td>><</td></tr> <tr><td>South Peds:</td><td>0</td></tr> <tr><td>South Entering:</td><td>148</td></tr> <tr><td>South Leg Total:</td><td>333</td></tr> </table>				Peds Cross:	><	South Peds:	0	South Entering:	148	South Leg Total:	333																											
Peds Cross:	><																																					
South Peds:	0																																					
South Entering:	148																																					
South Leg Total:	333																																					

Comments

Ontario Traffic Inc.

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:45:00 To: 17:45:00
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Municipality: Brampton Site #: 0042530200 Intersection: Dixie Rd & Father Tobin Rd TFR File #: 4 Count date: 6-Feb-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 902 North Entering: 298 North Peds: 0 Peds Cross: ><	<table style="margin: auto;"> <tr> <td>Heavys</td><td>0</td><td>0</td><td>0</td><td>↑</td><td>Heavys</td><td>0</td></tr> <tr> <td>Trucks</td><td>10</td><td>0</td><td>10</td><td></td><td>Trucks</td><td>13</td></tr> <tr> <td>Cars</td><td>286</td><td>2</td><td>288</td><td></td><td>Cars</td><td>591</td></tr> <tr> <td>Totals</td><td>296</td><td>2</td><td></td><td></td><td>Totals</td><td>604</td></tr> </table>	Heavys	0	0	0	↑	Heavys	0	Trucks	10	0	10		Trucks	13	Cars	286	2	288		Cars	591	Totals	296	2			Totals	604	East Leg Total: 76 East Entering: 64 East Peds: 0 Peds Cross: X																				
Heavys	0	0	0	↑	Heavys	0																																												
Trucks	10	0	10		Trucks	13																																												
Cars	286	2	288		Cars	591																																												
Totals	296	2			Totals	604																																												
Dixie Rd 																																																		
Father Tobin Rd 																																																		
Dixie Rd 																																																		
<table style="margin: auto;"> <tr> <td>Cars</td><td>342</td></tr> <tr> <td>Trucks</td><td>10</td></tr> <tr> <td>Heavys</td><td>0</td></tr> <tr> <td>Totals</td><td>352</td></tr> </table>	Cars	342	Trucks	10	Heavys	0	Totals	352	<table style="margin: auto;"> <tr> <td>Cars</td><td>583</td><td>10</td><td>593</td></tr> <tr> <td>Trucks</td><td>13</td><td>0</td><td>13</td></tr> <tr> <td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Totals</td><td>596</td><td>10</td><td></td></tr> </table>	Cars	583	10	593	Trucks	13	0	13	Heavys	0	0	0	Totals	596	10		<table style="margin: auto;"> <tr> <td>Cars</td><td>Trucks</td><td>Heavys</td><td>Totals</td></tr> <tr> <td>8</td><td>0</td><td>0</td><td>8</td></tr> <tr> <td>56</td><td>0</td><td>0</td><td>56</td></tr> <tr> <td>64</td><td>0</td><td>0</td><td></td></tr> </table> <table style="margin: auto;"> <tr> <td>Cars</td><td>Trucks</td><td>Heavys</td><td>Totals</td></tr> <tr> <td>12</td><td>0</td><td>0</td><td>12</td></tr> </table>	Cars	Trucks	Heavys	Totals	8	0	0	8	56	0	0	56	64	0	0		Cars	Trucks	Heavys	Totals	12	0	0	12
Cars	342																																																	
Trucks	10																																																	
Heavys	0																																																	
Totals	352																																																	
Cars	583	10	593																																															
Trucks	13	0	13																																															
Heavys	0	0	0																																															
Totals	596	10																																																
Cars	Trucks	Heavys	Totals																																															
8	0	0	8																																															
56	0	0	56																																															
64	0	0																																																
Cars	Trucks	Heavys	Totals																																															
12	0	0	12																																															
<table style="margin: auto;"> <tr> <td>Peds Cross:</td><td>><</td></tr> <tr> <td>South Peds:</td><td>0</td></tr> <tr> <td>South Entering:</td><td>606</td></tr> <tr> <td>South Leg Total:</td><td>958</td></tr> </table>			Peds Cross:	><	South Peds:	0	South Entering:	606	South Leg Total:	958																																								
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South Peds:	0																																																	
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South Leg Total:	958																																																	

Comments

Ontario Traffic Inc. Traffic Count Summary

Intersection: Dixie Rd & Father Tobin Rd

Count Date: 6-Feb-07

Municipality: Brampton

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	2	93	0	95	0	129	7:00:00	1	32	1	34	0
8:00:00	52	594	1	647	1	1183	8:00:00	0	314	222	536	1
9:00:00	10	497	0	507	0	757	9:00:00	0	191	59	250	0
11:00:00	1	33	0	34	0	45	11:00:00	0	9	2	11	0
12:00:00	4	148	0	152	0	273	12:00:00	0	111	10	121	0
13:00:00	3	127	0	130	0	260	13:00:00	0	115	15	130	0
14:00:00	3	137	0	140	0	288	14:00:00	0	135	13	148	0
15:00:00	1	26	0	27	0	70	15:00:00	0	40	3	43	0
16:00:00	6	191	0	197	0	643	16:00:00	0	412	34	446	0
17:00:00	9	261	0	270	0	836	17:00:00	0	548	18	566	0
18:00:00	1	271	0	272	0	815	18:00:00	0	534	9	543	0
Totals:	92	2378	1	2471	1	5299		1	2441	386	2828	1

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	4	0	0	4	0	4	7:00:00	0	0	0	0	0
8:00:00	160	0	9	169	1	169	8:00:00	0	0	0	0	0
9:00:00	121	0	3	124	0	124	9:00:00	0	0	0	0	0
11:00:00	2	0	1	3	0	3	11:00:00	0	0	0	0	0
12:00:00	15	0	0	15	0	15	12:00:00	0	0	0	0	0
13:00:00	46	0	4	50	0	50	13:00:00	0	0	0	0	0
14:00:00	48	0	2	50	0	50	14:00:00	0	0	0	0	0
15:00:00	11	0	0	11	0	11	15:00:00	0	0	0	0	0
16:00:00	102	0	10	112	0	112	16:00:00	0	0	0	0	0
17:00:00	55	0	12	67	0	67	17:00:00	0	0	0	0	0
18:00:00	37	0	4	41	0	41	18:00:00	0	0	0	0	0
Totals:	601	0	45	646	1	646		0	0	0	0	0

Calculated Values for Traffic Crossing Major Street									
Hours Ending:	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
Crossing Values:	162	121	15	46	48	102	55	37	

Ontario Traffic Inc.

Count Date: 6-Feb-07

Intersection: Dixie Rd & Father Tobin Rd

Municipality: Brampton

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 70 km/hr

Operating under free flow conditions

Warrant #1: Minimum Vehicular Volumes.

A. All Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1352	881	288	310	338	755	903	856	Yes: No: X
All Approaches	100% Fulfilled					100	100				100	100	100	500
	80% Fulfilled													0
	Actual % if Below 80%							48	52	56				156

Total:	656
Actual Average (Total/8):	82%

B. Minor Street Both Approaches.

100%	180	255	180	255	255									100%
80%	143	203	143	203	203	169	124	15	50	50	112	67	41	Yes: No: X
Minor Street Both Approaches	100% Fulfilled													0
	80% Fulfilled					80								80
	Actual % if Below 80%						69	8	28	28	62	37	23	255

Total:	335
Actual Average (Total/8):	42%

Ontario Traffic Inc.

Count Date: 6-Feb-07

Intersection: Dixie Rd & Father Tobin Rd

Municipality: Brampton

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 70 km/hr

Operating under free flow conditions

Warrant #2: Delay to Cross Traffic.

A. Major Street Both Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1183	757	273	260	288	643	836	815	Yes: No: X
All Approaches	100% Fulfilled					100	100				100	100	100	500
	80% Fulfilled													0
	Actual % if Below 80%							46	43	48				137

Total:	637
Actual Average (Total/8):	80%

B. Traffic Crossing Major Street.

100%	50	75	50	75	75									100%
80%	40	60	40	60	60	162	121	15	46	48	102	55	37	Yes: No: X
All Approaches	100% Fulfilled					100	100				100	100		400
	80% Fulfilled								80	80				160
	Actual % if Below 80%							30					74	104

Total:	664
Actual Average (Total/8):	83%

Ontario 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
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Municipality: Region of Peel Site #: 0042530200 Intersection: Dixie Rd & Octillo Blvd TFR File #: 1 Count date: 2-May-06	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 1568 North Entering: 879 North Peds: 0 Peds Cross: ⇌	<table border="1" style="margin: auto;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>22</td><td>2</td><td>24</td></tr> <tr><td>Cars</td><td>814</td><td>41</td><td>855</td></tr> <tr><td>Totals</td><td>836</td><td>43</td><td></td></tr> </table>	Cyclists	0	0	0	Trucks	22	2	24	Cars	814	41	855	Totals	836	43		<table border="1" style="margin: auto;"> <tr><td>Cyclists</td><td>1</td></tr> <tr><td>Trucks</td><td>12</td></tr> <tr><td>Cars</td><td>676</td></tr> <tr><td>Totals</td><td>689</td></tr> </table>	Cyclists	1	Trucks	12	Cars	676	Totals	689	East Leg Total: 311 East Entering: 220 East Peds: 61 Peds Cross: ⇌																				
Cyclists	0	0	0																																												
Trucks	22	2	24																																												
Cars	814	41	855																																												
Totals	836	43																																													
Cyclists	1																																														
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Dixie Rd																																															
Octillo Blvd																																															
Dixie Rd																																															
<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>981</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Cyclists</td><td>0</td></tr> <tr><td>Totals</td><td>1004</td></tr> </table>	Cars	981	Trucks	23	Cyclists	0	Totals	1004	<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>624</td><td>47</td><td>671</td></tr> <tr><td>Trucks</td><td>12</td><td>1</td><td>13</td></tr> <tr><td>Cyclists</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Totals</td><td>637</td><td>48</td><td></td></tr> </table>	Cars	624	47	671	Trucks	12	1	13	Cyclists	1	0	1	Totals	637	48		<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>52</td><td>0</td><td>0</td><td>52</td></tr> <tr><td>Trucks</td><td>167</td><td>1</td><td>0</td><td>168</td></tr> <tr><td>Cyclists</td><td>219</td><td>1</td><td>0</td><td></td></tr> </table>	Cars	52	0	0	52	Trucks	167	1	0	168	Cyclists	219	1	0		<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>88</td><td>3</td><td>0</td><td>91</td></tr> </table>	Cars	88	3	0	91
Cars	981																																														
Trucks	23																																														
Cyclists	0																																														
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Cars	624	47	671																																												
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Trucks	167	1	0	168																																											
Cyclists	219	1	0																																												
Cars	88	3	0	91																																											
<table border="1" style="margin: auto;"> <tr><td>Peds Cross:</td><td>⇌</td></tr> <tr><td>South Peds:</td><td>1</td></tr> <tr><td>South Entering:</td><td>685</td></tr> <tr><td>South Leg Total:</td><td>1689</td></tr> </table>				Peds Cross:	⇌	South Peds:	1	South Entering:	685	South Leg Total:	1689																																				
Peds Cross:	⇌																																														
South Peds:	1																																														
South Entering:	685																																														
South Leg Total:	1689																																														

Comments

Ontario Traffic Inc

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 13:00:00

To: 14:00:00

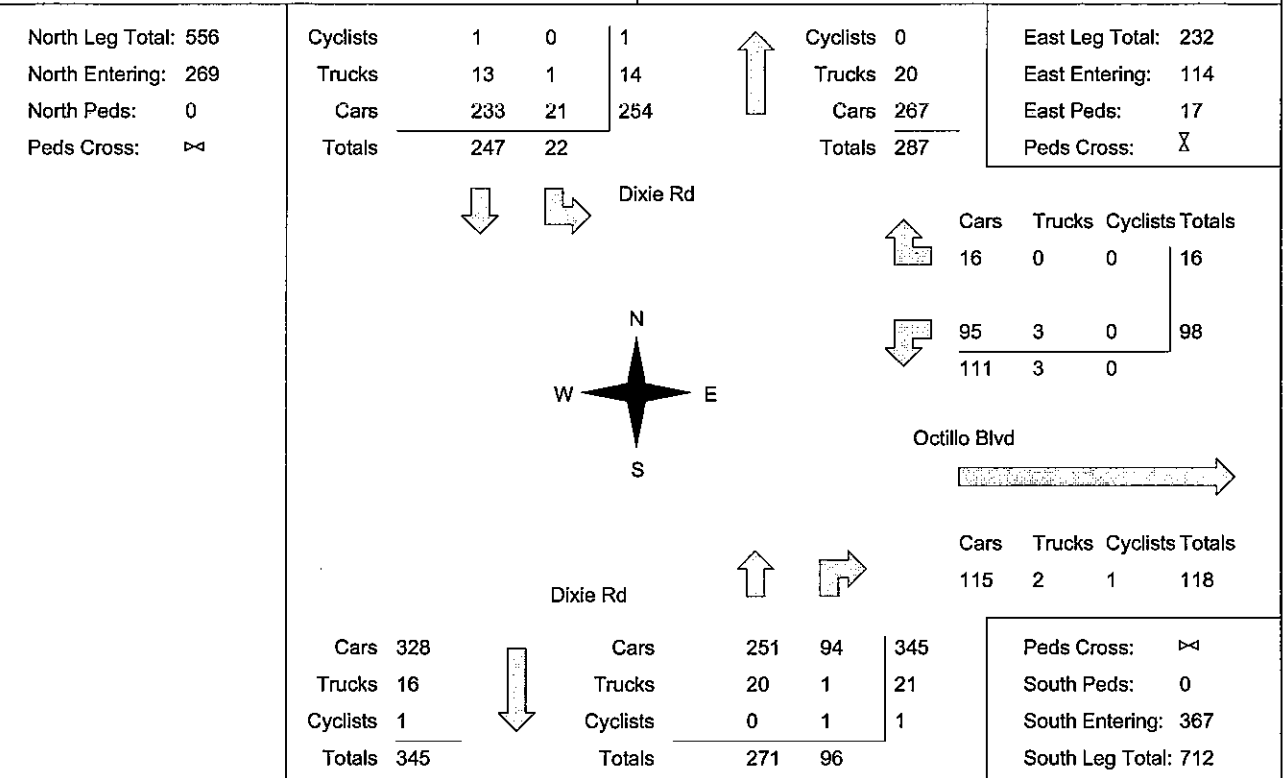
Municipality: Region of Peel
Site #: 0042530200
Intersection: Dixie Rd & Octillo Blvd
TFR File #: 1
Count date: 2-May-06

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 17:00:00

To: 18:00:00

Municipality: Region of Peel
Site #: 0042530200
Intersection: Dixie Rd & Octillo Blvd
TFR File #: 1
Count date: 2-May-06

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

<p>North Leg Total: 1186 North Entering: 619 North Peds: 23 Peds Cross: ⇌</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cyclists</td> <td style="width: 10%;">0</td> <td style="width: 10%;">0</td> <td style="width: 10%;">0</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>Trucks</td> <td>44</td> <td>14</td> <td>58</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cars</td> <td>514</td> <td>47</td> <td>561</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>558</td> <td>61</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Cyclists	0	0	0					Trucks	44	14	58					Cars	514	47	561					Totals	558	61						<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cyclists</td> <td style="width: 10%;">2</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>Trucks</td> <td>42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cars</td> <td>523</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>567</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Cyclists	2							Trucks	42							Cars	523							Totals	567							<p>East Leg Total: 375 East Entering: 171 East Peds: 27 Peds Cross: ⚡</p>																																
Cyclists	0	0	0																																																																																																
Trucks	44	14	58																																																																																																
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<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cars</td> <td style="width: 10%;">625</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>Trucks</td> <td>60</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cyclists</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>685</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Cars	625							Trucks	60							Cyclists	0							Totals	685							<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cars</td> <td style="width: 10%;">486</td> <td style="width: 10%;">130</td> <td style="width: 10%;">616</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>Trucks</td> <td>35</td> <td>12</td> <td>47</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cyclists</td> <td>2</td> <td>1</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Totals</td> <td>523</td> <td>143</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Cars	486	130	616					Trucks	35	12	47					Cyclists	2	1	3					Totals	523	143						<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cars</td> <td style="width: 10%;">37</td> <td style="width: 10%;">7</td> <td style="width: 10%;">0</td> <td style="width: 10%;">44</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td></td> <td>111</td> <td>16</td> <td>0</td> <td>127</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>148</td> <td>23</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Cars	37	7	0	44					111	16	0	127					148	23	0					<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Cars</td> <td style="width: 10%;">Trucks</td> <td style="width: 10%;">Cyclists</td> <td style="width: 10%;">Totals</td> </tr> <tr> <td>177</td> <td>26</td> <td>1</td> <td>204</td> </tr> </table>	Cars	Trucks	Cyclists	Totals	177	26	1	204
Cars	625																																																																																																		
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<p>Dixie Rd</p>																																																																																																			
<p>Peds Cross: ⇌</p> <p>South Peds: 4</p> <p>South Entering: 666</p> <p>South Leg Total: 1351</p>																																																																																																			

Comments

Ontario Traffic Inc

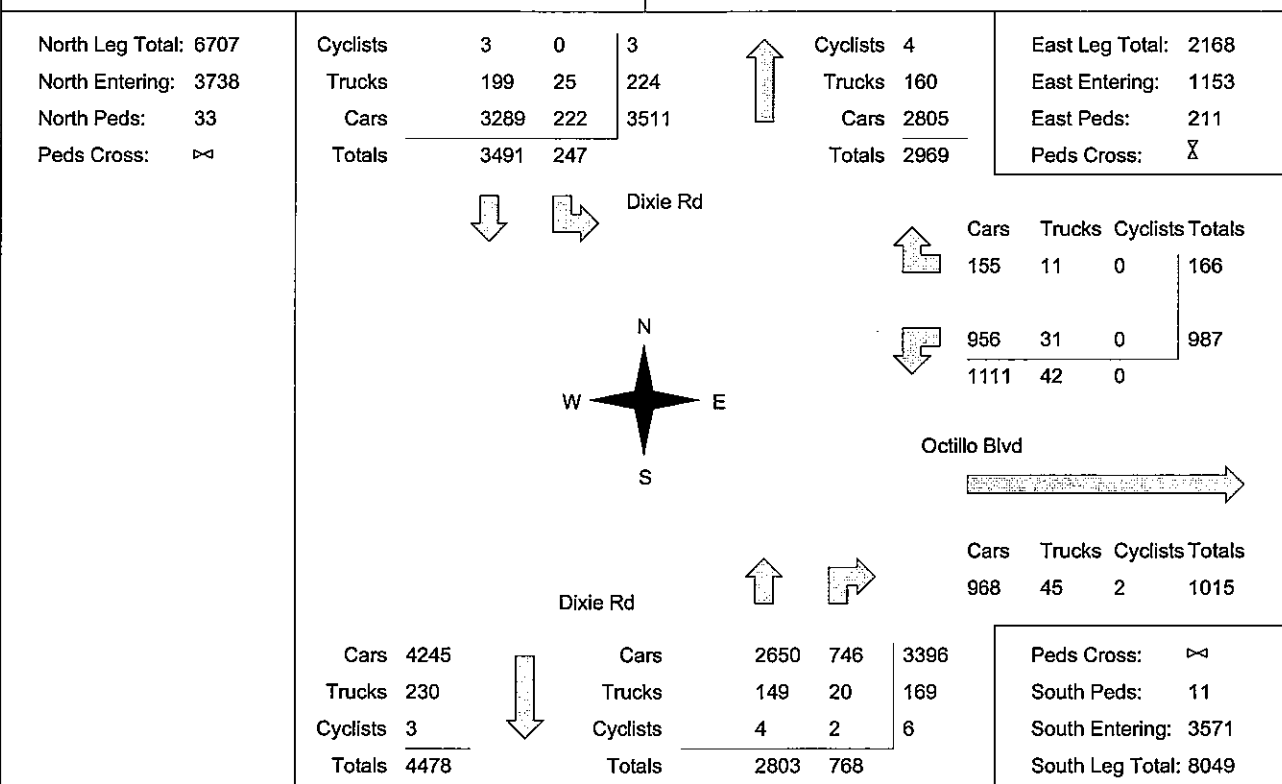
Total Count Diagram

Municipality: Region of Peel
Site #: 0042530200
Intersection: Dixie Rd & Octillo Blvd
TFR File #: 1
Count date: 2-May-06

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Octillo Blvd

Count Date: 2-May-06

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	25	721	0	746	0	1405	8:00:00	0	609	50	659	0
9:00:00	30	641	0	671	0	1001	9:00:00	0	234	96	330	1
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	12	225	0	237	0	553	12:00:00	0	240	76	316	0
13:00:00	8	242	0	250	0	568	13:00:00	0	198	120	318	0
14:00:00	22	247	0	269	0	636	14:00:00	0	271	96	367	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	23	387	0	410	2	845	16:00:00	0	330	105	435	1
17:00:00	66	470	0	536	8	1016	17:00:00	0	398	82	480	5
18:00:00	61	558	0	619	23	1285	18:00:00	0	523	143	666	4
Totals:	247	3491	0	3738	33	7309		0	2803	768	3571	11

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	169	0	41	210	59	210	8:00:00	0	0	0	0	0
9:00:00	215	0	21	236	18	236	9:00:00	0	0	0	0	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	99	0	8	107	11	107	12:00:00	0	0	0	0	0
13:00:00	88	0	6	94	20	94	13:00:00	0	0	0	0	0
14:00:00	98	0	16	114	17	114	14:00:00	0	0	0	0	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	91	0	7	98	28	98	16:00:00	0	0	0	0	0
17:00:00	100	0	23	123	31	123	17:00:00	0	0	0	0	0
18:00:00	127	0	44	171	27	171	18:00:00	0	0	0	0	0
Totals:	987	0	166	1153	211	1153		0	0	0	0	0

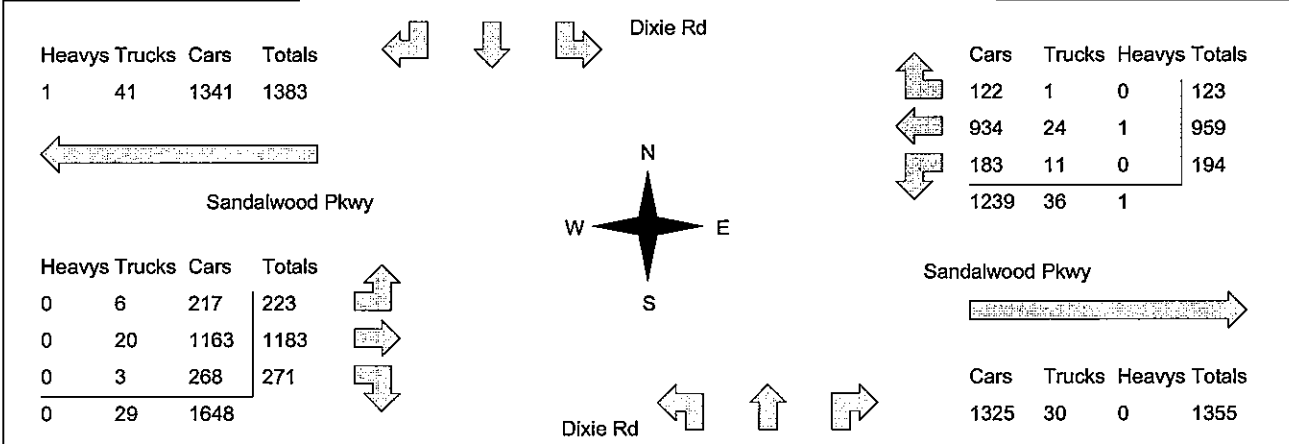
Calculated Values for Traffic Crossing Major Street									
Hours Ending:	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
Crossing Values:	169	216	99	88	98	94	113	154	

Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
Municipality: City of Brampton Site #: 0728700005 Intersection: Dixie Rd & Sandalwood Pkwy TFR File #: 4 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:	

**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1756 North Entering: 1163 North Peds: 45 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>9</td><td>28</td><td>2</td><td>39</td></tr> <tr><td>Cars</td><td>321</td><td>713</td><td>90</td><td>1124</td></tr> <tr><td>Totals</td><td>330</td><td>741</td><td>92</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	9	28	2	39	Cars	321	713	90	1124	Totals	330	741	92		↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Cars</td><td>570</td></tr> <tr><td>Totals</td><td>593</td></tr> </table>	Heavys	0	Trucks	23	Cars	570	Totals	593	East Leg Total: 2631 East Entering: 1276 East Peds: 50 Peds Cross: ∞
Heavys	0	0	0	0																												
Trucks	9	28	2	39																												
Cars	321	713	90	1124																												
Totals	330	741	92																													
Heavys	0																															
Trucks	23																															
Cars	570																															
Totals	593																															



Peds Cross: ∞ West Peds: 28 West Entering: 1677 West Leg Total: 3060	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1164</td></tr> <tr><td>Trucks</td><td>42</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1206</td></tr> </table>	Cars	1164	Trucks	42	Heavys	0	Totals	1206	↓	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>86</td><td>231</td><td>72</td><td>389</td></tr> <tr><td>Trucks</td><td>8</td><td>16</td><td>8</td><td>32</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>94</td><td>247</td><td>80</td><td></td></tr> </table>	Cars	86	231	72	389	Trucks	8	16	8	32	Heavys	0	0	0	0	Totals	94	247	80		Peds Cross: ∞ South Peds: 63 South Entering: 421 South Leg Total: 1627
Cars	1164																															
Trucks	42																															
Heavys	0																															
Totals	1206																															
Cars	86	231	72	389																												
Trucks	8	16	8	32																												
Heavys	0	0	0	0																												
Totals	94	247	80																													

Comments

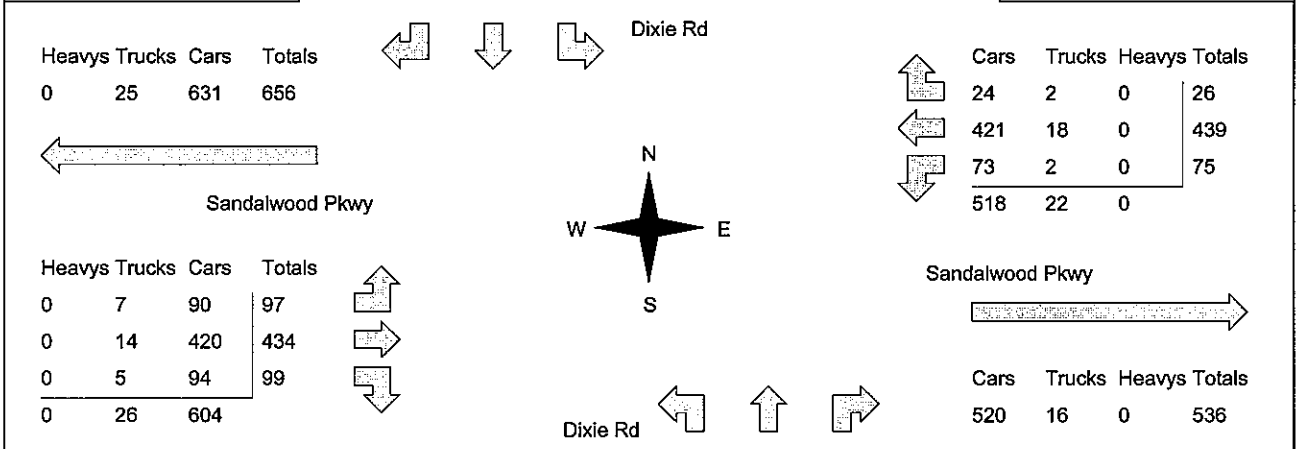
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 11:45:00 To: 12:45:00
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Municipality: City of Brampton Site #: 0728700005 Intersection: Dixie Rd & Sandalwood Pkwy TFR File #: 4 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 614 North Entering: 333 North Peds: 12 Peds Cross: ∞	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>4</td><td>15</td><td>0</td><td>19</td></tr> <tr><td>Cars</td><td>119</td><td>179</td><td>16</td><td>314</td></tr> <tr><td>Totals</td><td>123</td><td>194</td><td>16</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	4	15	0	19	Cars	119	179	16	314	Totals	123	194	16			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>22</td></tr> <tr><td>Cars</td><td>259</td></tr> <tr><td>Totals</td><td>281</td></tr> </table>	Heavys	0	Trucks	22	Cars	259	Totals	281	East Leg Total: 1076 East Entering: 540 East Peds: 21 Peds Cross: ∞
Heavys	0	0	0	0																												
Trucks	4	15	0	19																												
Cars	119	179	16	314																												
Totals	123	194	16																													
Heavys	0																															
Trucks	22																															
Cars	259																															
Totals	281																															



Peds Cross: ∞ West Peds: 9 West Entering: 630 West Leg Total: 1286	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>346</td></tr> <tr><td>Trucks</td><td>22</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>368</td></tr> </table>	Cars	346	Trucks	22	Heavys	0	Totals	368		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>91</td><td>145</td><td>84</td><td>320</td></tr> <tr><td>Trucks</td><td>3</td><td>13</td><td>2</td><td>18</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>94</td><td>158</td><td>86</td><td></td></tr> </table>	Cars	91	145	84	320	Trucks	3	13	2	18	Heavys	0	0	0	0	Totals	94	158	86		Peds Cross: ∞ South Peds: 24 South Entering: 338 South Leg Total: 706
Cars	346																															
Trucks	22																															
Heavys	0																															
Totals	368																															
Cars	91	145	84	320																												
Trucks	3	13	2	18																												
Heavys	0	0	0	0																												
Totals	94	158	86																													

Comments

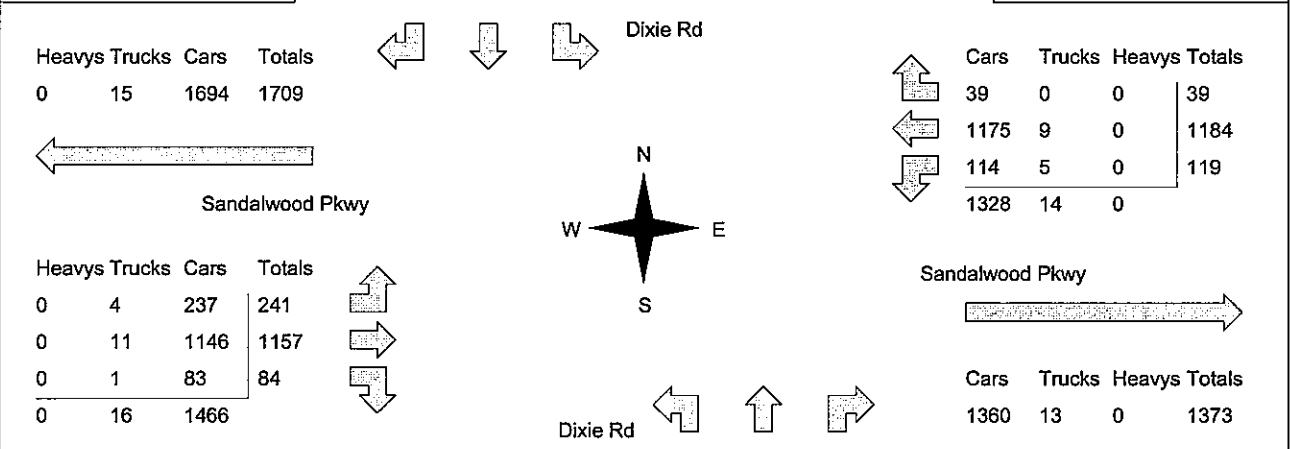
Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 17:00:00 To: 18:00:00
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Municipality: City of Brampton Site #: 0728700005 Intersection: Dixie Rd & Sandalwood Pkwy TFR File #: 4 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1442 North Entering: 719 North Peds: 5 Peds Cross: 8	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>6</td><td>12</td><td>0</td><td>18</td></tr> <tr><td>Cars</td><td>335</td><td>332</td><td>34</td><td>701</td></tr> <tr><td>Totals</td><td>341</td><td>344</td><td>34</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	6	12	0	18	Cars	335	332	34	701	Totals	341	344	34			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Cars</td><td>700</td></tr> <tr><td>Totals</td><td>723</td></tr> </table>	Heavys	0	Trucks	23	Cars	700	Totals	723	East Leg Total: 2715 East Entering: 1342 East Peds: 14 Peds Cross: 8
Heavys	0	0	0	0																												
Trucks	6	12	0	18																												
Cars	335	332	34	701																												
Totals	341	344	34																													
Heavys	0																															
Trucks	23																															
Cars	700																															
Totals	723																															



Peds Cross: 8 West Peds: 5 West Entering: 1482 West Leg Total: 3191	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>529</td></tr> <tr><td>Trucks</td><td>18</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>547</td></tr> </table>	Cars	529	Trucks	18	Heavys	0	Totals	547		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>184</td><td>424</td><td>180</td><td>788</td></tr> <tr><td>Trucks</td><td>0</td><td>19</td><td>2</td><td>21</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>184</td><td>443</td><td>182</td><td></td></tr> </table>	Cars	184	424	180	788	Trucks	0	19	2	21	Heavys	0	0	0	0	Totals	184	443	182		Peds Cross: 8 South Peds: 11 South Entering: 809 South Leg Total: 1356
Cars	529																															
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Totals	184	443	182																													

Comments

Ontario Traffic Inc

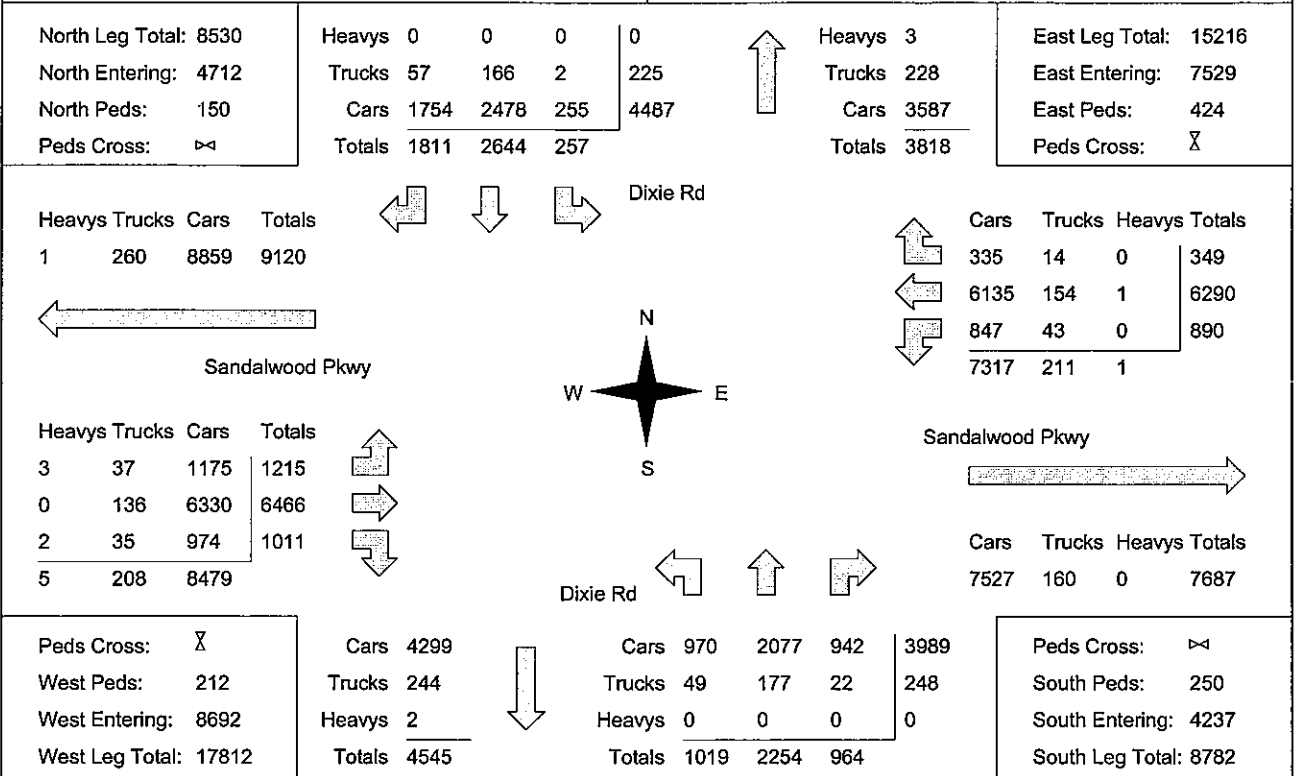
Total Count Diagram

Municipality: City of Brampton
Site #: 0728700005
Intersection: Dixie Rd & Sandalwood Pkwy
TFR File #: 4
Count date: 13-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Sandalwood Pkwy

Count Date: 13-Nov-07

Municipality: City of Brampton

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	14	3	17	0	29	7:00:00	2	5	5	12	0
8:00:00	79	765	285	1129	10	1571	8:00:00	62	311	69	442	17
9:00:00	33	517	294	844	47	1205	9:00:00	128	153	80	361	50
11:00:00	1	1	4	6	0	12	11:00:00	0	4	2	6	0
12:00:00	6	160	101	267	16	624	12:00:00	100	169	88	357	28
13:00:00	15	178	128	321	12	673	13:00:00	100	165	87	352	24
14:00:00	24	164	124	312	2	657	14:00:00	95	167	83	345	25
15:00:00	0	6	2	8	3	8	15:00:00	0	0	0	0	0
16:00:00	31	223	228	482	45	1159	16:00:00	142	347	188	677	87
17:00:00	34	267	297	598	10	1474	17:00:00	206	490	180	876	8
18:00:00	34	344	341	719	5	1528	18:00:00	184	443	182	809	11
Totals:	257	2639	1807	4703	150	8940		1019	2254	964	4237	250
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	6	0	6	1	25	7:00:00	5	5	9	19	0
8:00:00	180	695	154	1029	32	2557	8:00:00	208	1104	216	1528	8
9:00:00	170	920	25	1115	33	2445	9:00:00	159	932	239	1330	35
11:00:00	0	20	0	20	0	26	11:00:00	3	0	3	6	1
12:00:00	62	403	14	479	52	1076	12:00:00	72	439	86	597	39
13:00:00	75	438	22	535	24	1166	13:00:00	105	431	95	631	9
14:00:00	56	454	18	528	38	1169	14:00:00	94	459	88	641	4
15:00:00	1	24	1	26	0	33	15:00:00	0	7	0	7	0
16:00:00	132	994	35	1161	174	2411	16:00:00	157	985	108	1250	97
17:00:00	95	1152	41	1288	53	2489	17:00:00	171	947	83	1201	14
18:00:00	119	1184	39	1342	14	2824	18:00:00	241	1157	84	1482	5
Totals:	890	6290	349	7529	421	16221		1215	6466	1011	8692	212
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	1519	1358	617	654		636	1415	1436	1560			

Ontario 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: Region of Peel
Site #: 0042450300
Intersection: Dixie Rd & Springtown Trail
TFR File #: 3
Count date: 15-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 1341 North Entering: 909 North Peds: 0 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>30</td><td>0</td><td>31</td></tr> <tr><td>Cars</td><td>6</td><td>869</td><td>3</td><td>878</td></tr> <tr><td>Totals</td><td>7</td><td>899</td><td>3</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	30	0	31	Cars	6	869	3	878	Totals	7	899	3			<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>25</td></tr> <tr><td>Cars</td><td>407</td></tr> <tr><td>Totals</td><td>432</td></tr> </table>	Heavys	0	Trucks	25	Cars	407	Totals	432	East Leg Total: 51 East Entering: 31 East Peds: 0 Peds Cross: ∞																																																																																																										
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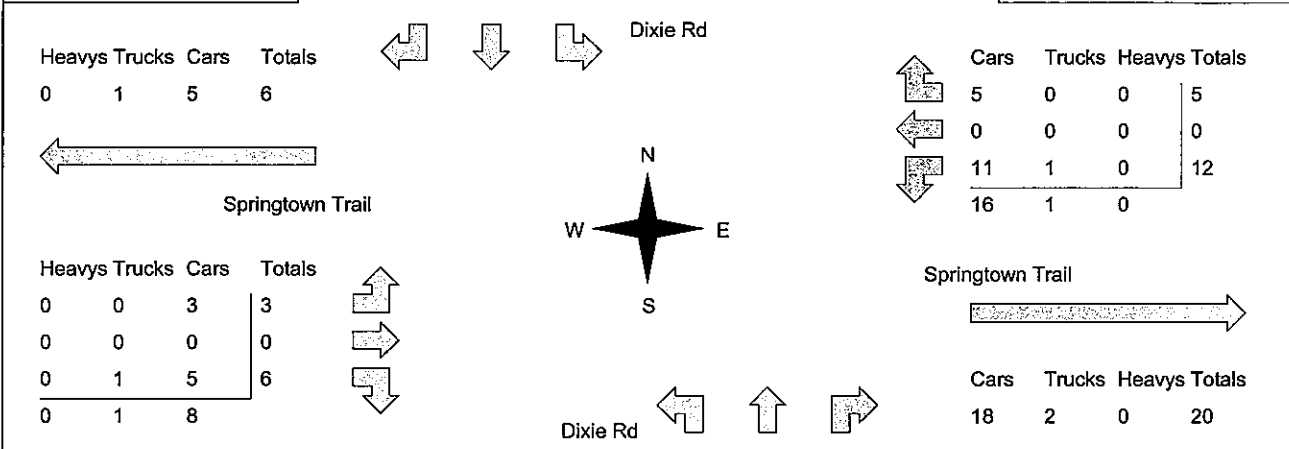
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 11:30:00 To: 12:30:00
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Municipality: Region of Peel Site #: 0042450300 Intersection: Dixie Rd & Springtown Trail TFR File #: 3 Count date: 15-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 683 North Entering: 343 North Peds: 0 Peds Cross: ⇄	<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>12</td><td>2</td><td>15</td></tr> <tr><td>Cars</td><td>4</td><td>318</td><td>6</td><td>328</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>5</td><td>330</td><td>8</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	12	2	15	Cars	4	318	6	328	Totals	5	330	8		<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>17</td></tr> <tr><td>Cars</td><td>323</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>340</td></tr> </table>	Heavys	0	Trucks	17	Cars	323	Totals	340	East Leg Total: 37 East Entering: 17 East Peds: 0 Peds Cross: ⚡
Heavys	0	0	0	0																											
Trucks	1	12	2	15																											
Cars	4	318	6	328																											
Totals	5	330	8																												
Heavys	0																														
Trucks	17																														
Cars	323																														
Totals	340																														



Peds Cross: ⚡ West Peds: 0 West Entering: 9 West Leg Total: 15	<table style="margin: auto;"> <tr><td>Cars</td><td>334</td></tr> <tr><td>Trucks</td><td>14</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>348</td></tr> </table>	Cars	334	Trucks	14	Heavys	0	Totals	348	<table style="margin: auto;"> <tr><td>Cars</td><td>1</td><td>315</td><td>12</td><td>328</td></tr> <tr><td>Trucks</td><td>0</td><td>17</td><td>0</td><td>17</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>1</td><td>332</td><td>12</td><td></td></tr> </table>	Cars	1	315	12	328	Trucks	0	17	0	17	Heavys	0	0	0	0	Totals	1	332	12		Peds Cross: ⇄ South Peds: 34 South Entering: 345 South Leg Total: 693
Cars	334																														
Trucks	14																														
Heavys	0																														
Totals	348																														
Cars	1	315	12	328																											
Trucks	0	17	0	17																											
Heavys	0	0	0	0																											
Totals	1	332	12																												

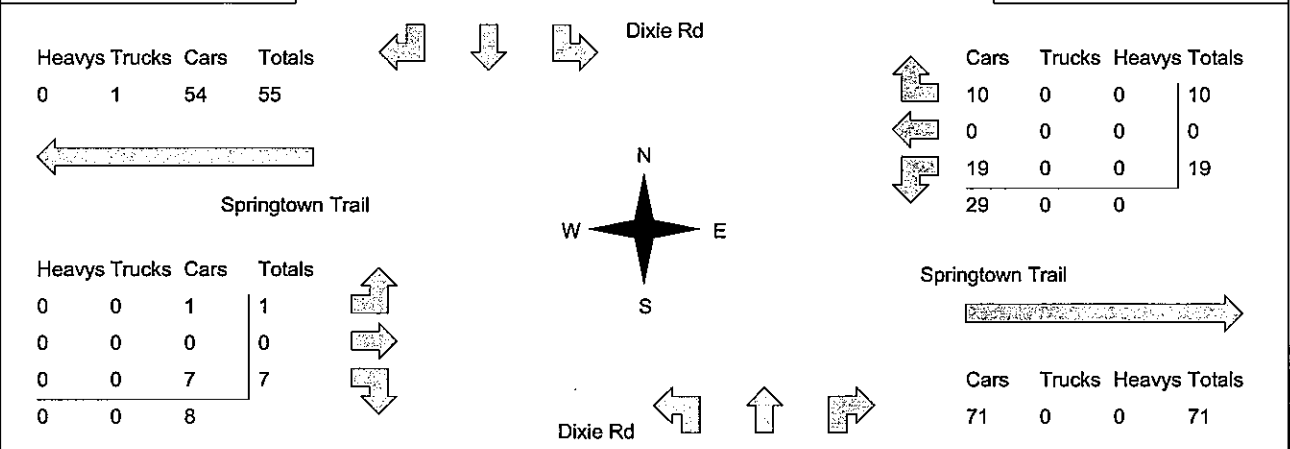
Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 17:00:00 To: 18:00:00
Municipality: Region of Peel Site #: 0042450300 Intersection: Dixie Rd & Springtown Trail TFR File #: 3 Count date: 15-Nov-07	Weather conditions: Person(s) who counted:	

**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1308 North Entering: 404 North Peds: 0 Peds Cross: ∞	<table style="border-collapse: collapse; margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>13</td><td>0</td><td>13</td></tr> <tr><td>Cars</td><td>13</td><td>369</td><td>9</td><td>391</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>13</td><td>382</td><td>9</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	13	0	13	Cars	13	369	9	391	Totals	13	382	9		 <table style="border-collapse: collapse; margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>15</td></tr> <tr><td>Cars</td><td>889</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>904</td></tr> </table>	Heavys	0	Trucks	15	Cars	889	Totals	904	East Leg Total: 100 East Entering: 29 East Peds: 0 Peds Cross: ∞
Heavys	0	0	0	0																											
Trucks	0	13	0	13																											
Cars	13	369	9	391																											
Totals	13	382	9																												
Heavys	0																														
Trucks	15																														
Cars	889																														
Totals	904																														



Peds Cross: ∞ West Peds: 0 West Entering: 8 West Leg Total: 63	<table style="border-collapse: collapse; margin: auto;"> <tr><td>Cars</td><td>395</td></tr> <tr><td>Trucks</td><td>13</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>408</td></tr> </table>	Cars	395	Trucks	13	Heavys	0	Totals	408	 <table style="border-collapse: collapse; margin: auto;"> <tr><td>Cars</td><td>41</td><td>878</td><td>62</td><td>981</td></tr> <tr><td>Trucks</td><td>1</td><td>15</td><td>0</td><td>16</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>42</td><td>893</td><td>62</td><td></td></tr> </table>	Cars	41	878	62	981	Trucks	1	15	0	16	Heavys	0	0	0	0	Totals	42	893	62		Peds Cross: ∞ South Peds: 15 South Entering: 997 South Leg Total: 1405
Cars	395																														
Trucks	13																														
Heavys	0																														
Totals	408																														
Cars	41	878	62	981																											
Trucks	1	15	0	16																											
Heavys	0	0	0	0																											
Totals	42	893	62																												

Comments

Ontario Traffic Inc

Total Count Diagram

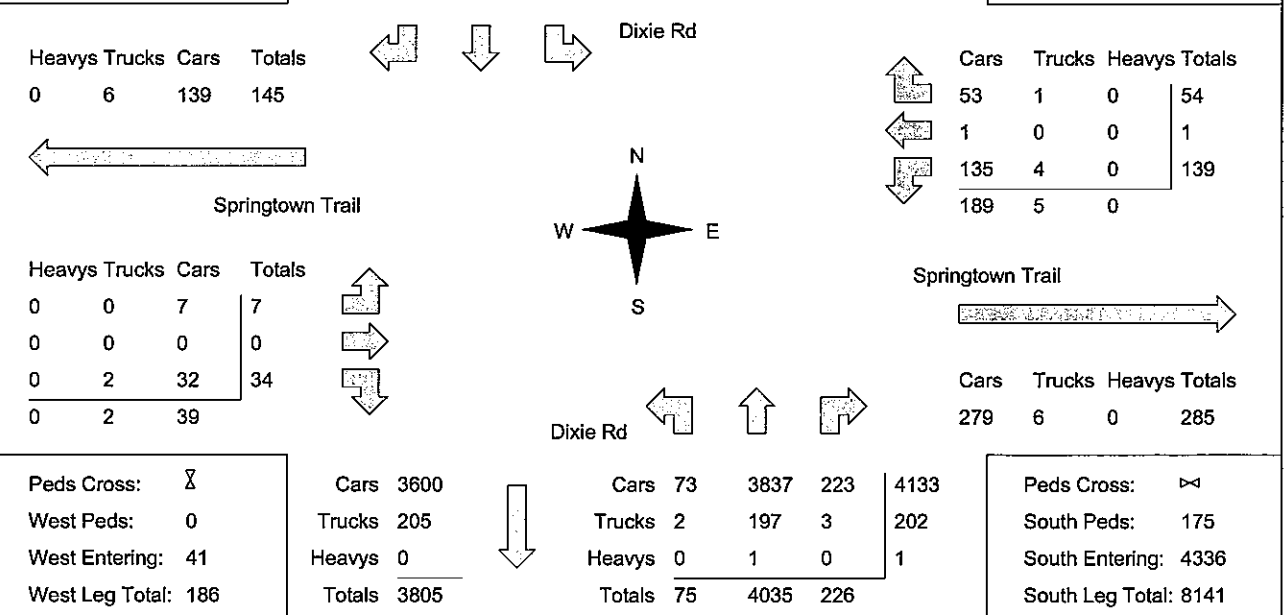
Municipality: Region of Peel
Site #: 0042450300
Intersection: Dixie Rd & Springtown Trail
TFR File #: 3
Count date: 15-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 7856	Heavys 0 0 0 0	↑	Heavys 1	East Leg Total: 479
North Entering: 3760	Trucks 4 199 3 206		Trucks 198	East Entering: 194
North Peds: 0	Cars 65 3433 56 3554		Cars 3897	East Peds: 0
Peds Cross: ∞	Totals 69 3632 59		Totals 4096	Peds Cross: ∞



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Springtown Trail

Count Date: 15-Nov-07

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	4	830	3	837	0	1272	8:00:00	2	418	15	435	12
9:00:00	1	770	8	779	0	1130	9:00:00	4	330	17	351	24
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	12	331	5	348	0	669	12:00:00	7	299	15	321	42
13:00:00	3	318	3	324	0	662	13:00:00	5	320	13	338	28
14:00:00	7	263	5	275	0	595	14:00:00	4	299	17	320	13
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	8	397	20	425	0	1128	16:00:00	4	661	38	703	22
17:00:00	15	341	12	368	0	1239	17:00:00	7	815	49	871	19
18:00:00	9	382	13	404	0	1401	18:00:00	42	893	62	997	15
Totals:	59	3632	69	3760	0	8096		75	4035	226	4336	175
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	22	1	8	31	0	32	8:00:00	0	0	1	1	0
9:00:00	24	0	9	33	0	35	9:00:00	0	0	2	2	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	17	0	5	22	0	30	12:00:00	1	0	7	8	0
13:00:00	9	0	4	13	0	22	13:00:00	3	0	6	9	0
14:00:00	15	0	5	20	0	24	14:00:00	2	0	2	4	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	17	0	7	24	0	28	16:00:00	0	0	4	4	0
17:00:00	16	0	6	22	0	27	17:00:00	0	0	5	5	0
18:00:00	19	0	10	29	0	37	18:00:00	1	0	7	8	0
Totals:	139	1	54	194	0	235		7	0	34	41	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	35	48	60	40		30	39	35	35			

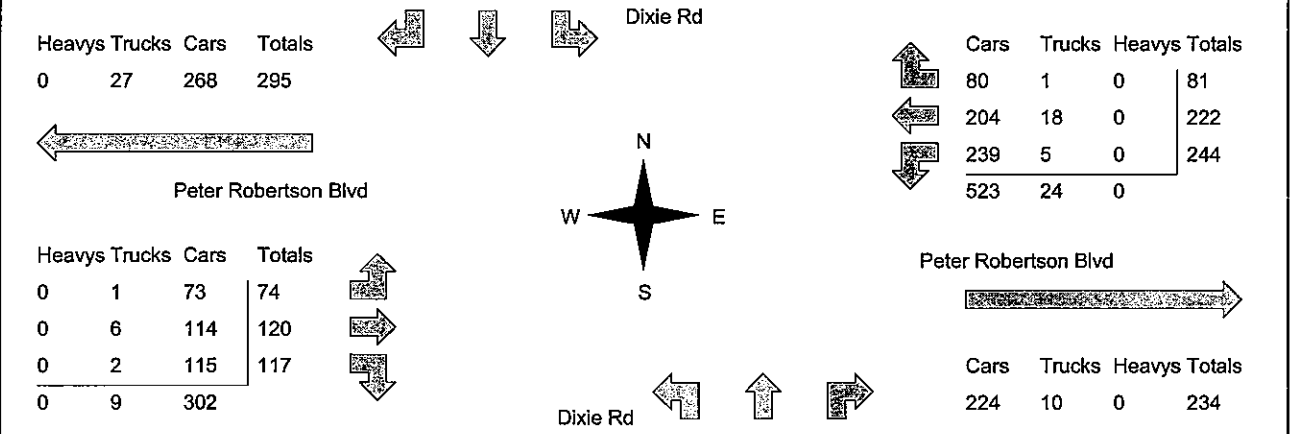
Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
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Municipality: Region of Peel Site #: 0042382100 Intersection: Dixie Rd & Peter Robertson Blvd TFR File #: 2 Count date: 14-Nov-07	Weather conditions: Person(s) who counted:
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**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1356 North Entering: 919 North Peds: 38 Peds Cross: ⇌	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>4</td><td>21</td><td>4</td><td>29</td></tr> <tr><td>Cars</td><td>25</td><td>773</td><td>92</td><td>890</td></tr> <tr><td>Totals</td><td>29</td><td>794</td><td>96</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	4	21	4	29	Cars	25	773	92	890	Totals	29	794	96		 ↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Cars</td><td>414</td></tr> <tr><td>Totals</td><td>437</td></tr> </table>	Heavys	0	Trucks	23	Cars	414	Totals	437	East Leg Total: 781 East Entering: 547 East Peds: 0 Peds Cross: ⚡
Heavys	0	0	0	0																												
Trucks	4	21	4	29																												
Cars	25	773	92	890																												
Totals	29	794	96																													
Heavys	0																															
Trucks	23																															
Cars	414																															
Totals	437																															



Peds Cross: ⚡ West Peds: 0 West Entering: 311 West Leg Total: 606	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1127</td></tr> <tr><td>Trucks</td><td>28</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1155</td></tr> </table>	Cars	1127	Trucks	28	Heavys	0	Totals	1155	 ↓	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>39</td><td>261</td><td>18</td><td>318</td></tr> <tr><td>Trucks</td><td>5</td><td>21</td><td>0</td><td>26</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>44</td><td>282</td><td>18</td><td></td></tr> </table>	Cars	39	261	18	318	Trucks	5	21	0	26	Heavys	0	0	0	0	Totals	44	282	18		Peds Cross: ⇌ South Peds: 0 South Entering: 344 South Leg Total: 1499
Cars	1127																															
Trucks	28																															
Heavys	0																															
Totals	1155																															
Cars	39	261	18	318																												
Trucks	5	21	0	26																												
Heavys	0	0	0	0																												
Totals	44	282	18																													

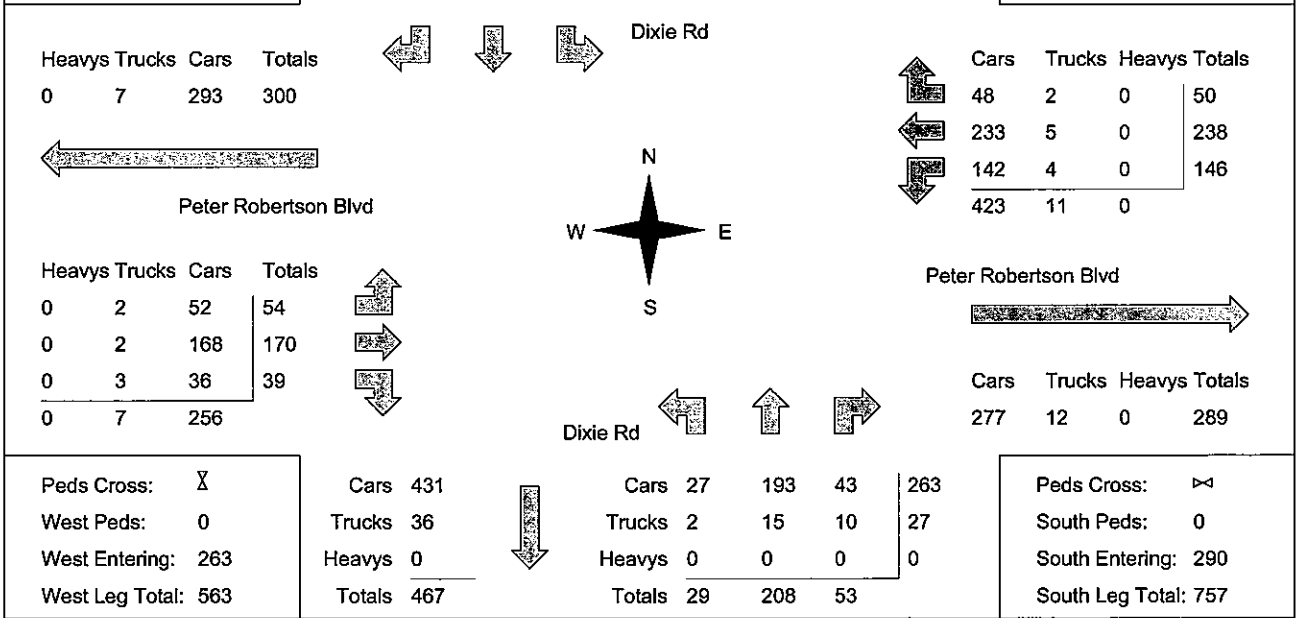
Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 11:30:00 To: 12:30:00
Municipality: Region of Peel Site #: 0042382100 Intersection: Dixie Rd & Peter Robertson Blvd TFR File #: 2 Count date: 14-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 693 North Entering: 381 North Peds: 69 Peds Cross: 2	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>29</td><td>0</td><td>29</td></tr> <tr><td>Cars</td><td>33</td><td>253</td><td>66</td><td>352</td></tr> <tr><td>Totals</td><td>33</td><td>282</td><td>66</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	29	0	29	Cars	33	253	66	352	Totals	33	282	66		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>19</td></tr> <tr><td>Cars</td><td>293</td></tr> <tr><td>Totals</td><td>312</td></tr> </table>	Heavys	0	Trucks	19	Cars	293	Totals	312	East Leg Total: 723 East Entering: 434 East Peds: 0 Peds Cross: 1
Heavys	0	0	0	0																											
Trucks	0	29	0	29																											
Cars	33	253	66	352																											
Totals	33	282	66																												
Heavys	0																														
Trucks	19																														
Cars	293																														
Totals	312																														



Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 17:00:00

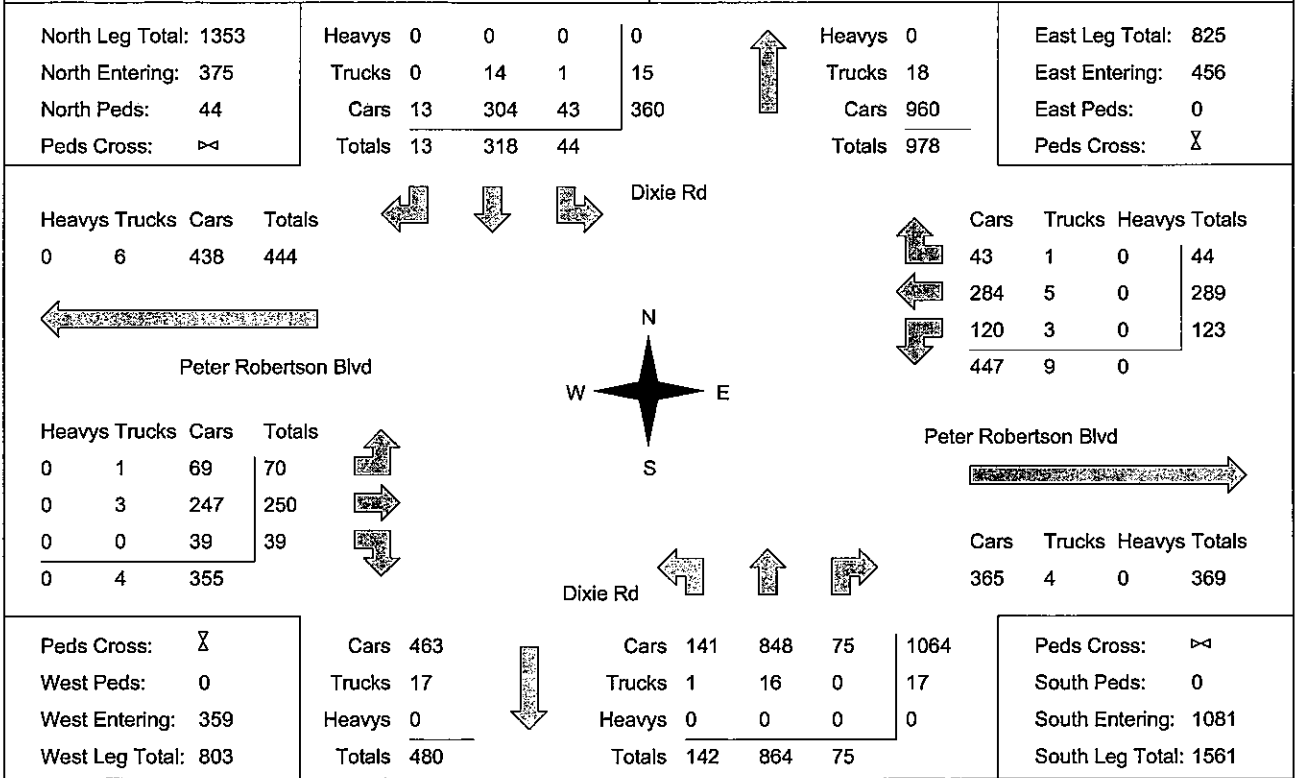
To: 18:00:00

Municipality: Region of Peel
Site #: 0042382100
Intersection: Dixie Rd & Peter Robertson Blvd
TFR File #: 2
Count date: 14-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Region of Peel
Site #: 0042382100
Intersection: Dixie Rd & Peter Robertson Blvd
TFR File #: 2
Count date: 14-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 7944 North Entering: 3623 North Peds: 306 Peds Cross: ∇	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys 1 0 0 Trucks 10 179 13 Cars 167 2768 485 Totals 178 2947 498 </td> <td style="padding: 2px; text-align: center;"> 1 202 3420 </td> <td style="border-left: 1px solid black; padding: 2px;"> Heavys 0 Trucks 210 Cars 4111 Totals 4321 </td> </tr> </table>	Heavys 1 0 0 Trucks 10 179 13 Cars 167 2768 485 Totals 178 2947 498	1 202 3420	Heavys 0 Trucks 210 Cars 4111 Totals 4321	East Leg Total: 5655 East Entering: 3370 East Peds: 0 Peds Cross: ∇																
Heavys 1 0 0 Trucks 10 179 13 Cars 167 2768 485 Totals 178 2947 498	1 202 3420	Heavys 0 Trucks 210 Cars 4111 Totals 4321																			
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 1 87 2289 2377 </td> <td style="padding: 2px;"> </td> </tr> </table> </td> <td style="width: 25%; padding: 5px; text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0 </td> <td style="padding: 2px;"> </td> </tr> </table> </td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223 </td> <td style="padding: 2px;"> </td> </tr> </table> </td> <td colspan="2" style="text-align: center; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480 </td> <td style="padding: 2px;"> </td> </tr> </table> </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> Peds Cross: ∇ West Peds: 0 West Entering: 2281 West Leg Total: 4658 </td> <td colspan="2" style="padding: 5px;"> Peds Cross: ∇ South Peds: 0 South Entering: 4439 South Leg Total: 9169 </td> </tr> </table>				<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 1 87 2289 2377 </td> <td style="padding: 2px;"> </td> </tr> </table>	Heavys Trucks Cars Totals 1 87 2289 2377		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0 </td> <td style="padding: 2px;"> </td> </tr> </table>	Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223 </td> <td style="padding: 2px;"> </td> </tr> </table>		Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480 </td> <td style="padding: 2px;"> </td> </tr> </table>		Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480		Peds Cross: ∇ West Peds: 0 West Entering: 2281 West Leg Total: 4658		Peds Cross: ∇ South Peds: 0 South Entering: 4439 South Leg Total: 9169	
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 1 87 2289 2377 </td> <td style="padding: 2px;"> </td> </tr> </table>	Heavys Trucks Cars Totals 1 87 2289 2377		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0 </td> <td style="padding: 2px;"> </td> </tr> </table>	Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0																	
Heavys Trucks Cars Totals 1 87 2289 2377																					
Cars Trucks Heavys Totals 410 20 0 430 1568 56 0 1624 1284 32 0 1316 3262 108 0																					
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223 </td> <td style="padding: 2px;"> </td> </tr> </table>		Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 2px;"> Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480 </td> <td style="padding: 2px;"> </td> </tr> </table>		Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480															
Heavys Trucks Cars Totals 0 11 496 507 0 33 1274 1307 0 14 453 467 0 58 2223																					
Cars Trucks Heavys Totals 554 3205 460 4219 Trucks 21 179 20 220 Heavys 0 0 0 0 Totals 575 3384 480																					
Peds Cross: ∇ West Peds: 0 West Entering: 2281 West Leg Total: 4658		Peds Cross: ∇ South Peds: 0 South Entering: 4439 South Leg Total: 9169																			

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Peter Robertson Blvd

Count Date: 14-Nov-07

Municipality: Region of Peel

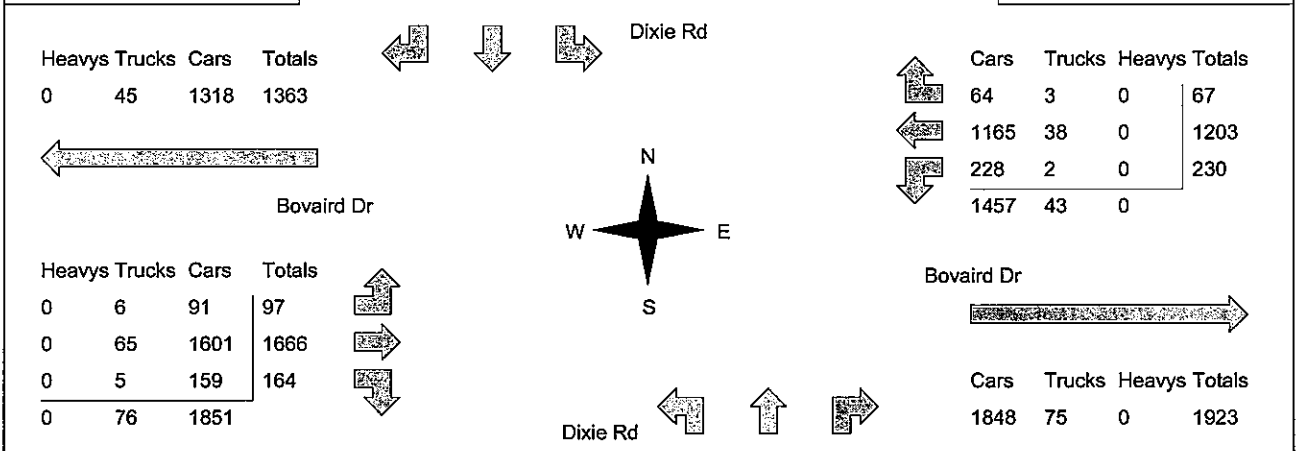
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	102	767	21	890	35	1227	8:00:00	43	279	15	337	0
9:00:00	62	583	20	665	28	968	9:00:00	28	251	24	303	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	61	267	29	357	59	644	12:00:00	28	201	58	287	0
13:00:00	52	243	31	326	52	656	13:00:00	45	235	50	330	0
14:00:00	43	214	21	278	22	637	14:00:00	53	228	78	359	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	75	274	28	377	45	1131	16:00:00	101	574	79	754	0
17:00:00	59	281	15	355	21	1343	17:00:00	135	752	101	988	0
18:00:00	44	318	13	375	44	1456	18:00:00	142	864	75	1081	0
Totals:	498	2947	178	3623	306	8062		575	3384	480	4439	0
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	246	103	97	446	0	713	8:00:00	75	86	106	267	0
9:00:00	230	249	42	521	0	805	9:00:00	41	130	113	284	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	139	193	55	387	0	631	12:00:00	49	156	39	244	0
13:00:00	136	213	48	397	0	629	13:00:00	44	148	40	232	0
14:00:00	133	160	39	332	0	606	14:00:00	69	156	49	274	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	149	204	47	400	0	720	16:00:00	89	177	54	320	0
17:00:00	160	213	58	431	0	732	17:00:00	70	204	27	301	0
18:00:00	123	289	44	456	0	815	18:00:00	70	250	39	359	0
Totals:	1316	1624	430	3370	0	5651		507	1307	467	2281	0
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	459	548	440	445		384	487	464	526			

Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
Municipality: Region of Peel Site #: 0042320400 Intersection: Dixie Rd & Bovaird Dr TFR File #: 2 Count date: 7-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 1312 North Entering: 930 North Peds: 3 Peds Cross: ⇐	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>6</td><td>23</td><td>4</td><td>33</td></tr> <tr><td>Cars</td><td>103</td><td>624</td><td>170</td><td>897</td></tr> <tr><td>Totals</td><td>109</td><td>647</td><td>174</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	6	23	4	33	Cars	103	624	170	897	Totals	109	647	174		↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>24</td></tr> <tr><td>Cars</td><td>358</td></tr> <tr><td>Totals</td><td>382</td></tr> </table>	Heavys	0	Trucks	24	Cars	358	Totals	382	East Leg Total: 3423 East Entering: 1500 East Peds: 4 Peds Cross: X
Heavys	0	0	0	0																												
Trucks	6	23	4	33																												
Cars	103	624	170	897																												
Totals	109	647	174																													
Heavys	0																															
Trucks	24																															
Cars	358																															
Totals	382																															



Peds Cross: X West Peds: 2 West Entering: 1927 West Leg Total: 3290	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1011</td></tr> <tr><td>Trucks</td><td>30</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1041</td></tr> </table>	Cars	1011	Trucks	30	Heavys	0	Totals	1041	↓	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>50</td><td>203</td><td>77</td><td>330</td></tr> <tr><td>Trucks</td><td>1</td><td>15</td><td>6</td><td>22</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>51</td><td>218</td><td>83</td><td></td></tr> </table>	Cars	50	203	77	330	Trucks	1	15	6	22	Heavys	0	0	0	0	Totals	51	218	83		Peds Cross: ⇐ South Peds: 10 South Entering: 352 South Leg Total: 1393
Cars	1011																															
Trucks	30																															
Heavys	0																															
Totals	1041																															
Cars	50	203	77	330																												
Trucks	1	15	6	22																												
Heavys	0	0	0	0																												
Totals	51	218	83																													

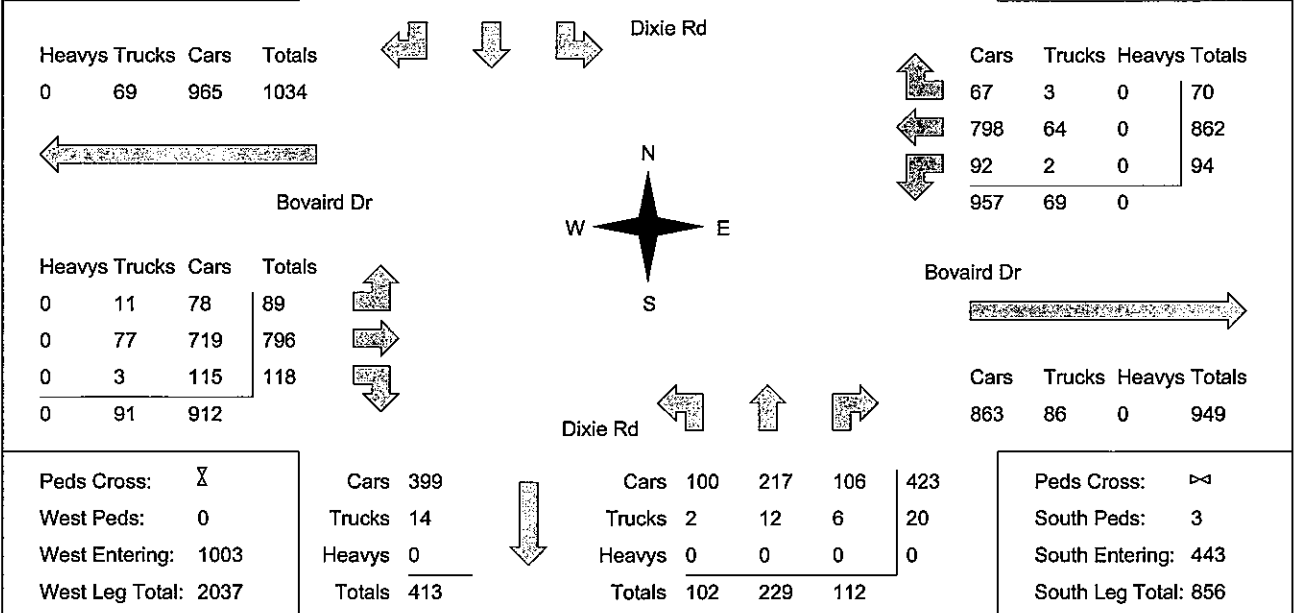
Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 12:15:00 To: 13:15:00
Municipality: Region of Peel Site #: 0042320400 Intersection: Dixie Rd & Bovaird Dr TFR File #: 2 Count date: 7-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 700 North Entering: 312 North Peds: 1 Peds Cross: 2	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>3</td><td>9</td><td>3</td><td>15</td></tr> <tr><td>Cars</td><td>67</td><td>192</td><td>38</td><td>297</td></tr> <tr><td>Totals</td><td>70</td><td>201</td><td>41</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	3	9	3	15	Cars	67	192	38	297	Totals	70	201	41		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>26</td></tr> <tr><td>Cars</td><td>362</td></tr> <tr><td>Totals</td><td>388</td></tr> </table>	Heavys	0	Trucks	26	Cars	362	Totals	388	East Leg Total: 1975 East Entering: 1026 East Peds: 0 Peds Cross: 1
Heavys	0	0	0	0																											
Trucks	3	9	3	15																											
Cars	67	192	38	297																											
Totals	70	201	41																												
Heavys	0																														
Trucks	26																														
Cars	362																														
Totals	388																														



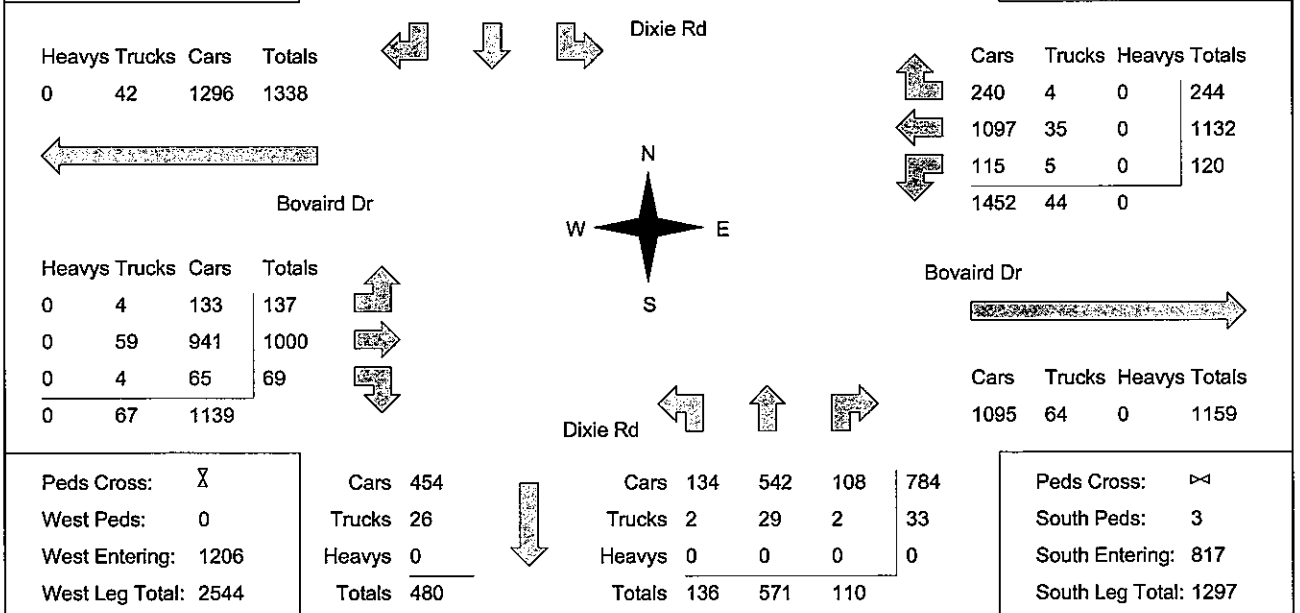
Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 15:30:00 To: 16:30:00
Municipality: Region of Peel Site #: 0042320400 Intersection: Dixie Rd & Bovaird Dr TFR File #: 2 Count date: 7-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 1362 North Entering: 410 North Peds: 1 Peds Cross: ><	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>5</td><td>17</td><td>3</td><td>25</td></tr> <tr><td>Cars</td><td>65</td><td>274</td><td>46</td><td>385</td></tr> <tr><td>Totals</td><td>70</td><td>291</td><td>49</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	5	17	3	25	Cars	65	274	46	385	Totals	70	291	49		↑	Heavys 0 Trucks 37 Cars 915 Totals 952	East Leg Total: 2655 East Entering: 1496 East Peds: 1 Peds Cross: X
Heavys	0	0	0	0																				
Trucks	5	17	3	25																				
Cars	65	274	46	385																				
Totals	70	291	49																					



Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Region of Peel
Site #: 0042320400
Intersection: Dixie Rd & Bovaird Dr
TFR File #: 2
Count date: 7-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 8193 North Entering: 3637 North Peds: 19 Peds Cross: 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Trucks</td><td>43</td><td>109</td><td>21</td><td>173</td></tr> <tr> <td>Cars</td><td>581</td><td>2312</td><td>571</td><td>3464</td></tr> <tr> <td>Totals</td><td>624</td><td>2421</td><td>592</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	43	109	21	173	Cars	581	2312	571	3464	Totals	624	2421	592		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>0</td></tr> <tr> <td>Trucks</td><td>196</td></tr> <tr> <td>Cars</td><td>4360</td></tr> <tr> <td>Totals</td><td>4556</td></tr> </table>	Heavys	0	Trucks	196	Cars	4360	Totals	4556	East Leg Total: 19887 East Entering: 10178 East Peds: 12 Peds Cross: 8
Heavys	0	0	0	0																											
Trucks	43	109	21	173																											
Cars	581	2312	571	3464																											
Totals	624	2421	592																												
Heavys	0																														
Trucks	196																														
Cars	4360																														
Totals	4556																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>0</td><td>451</td><td>9100</td><td>9551</td></tr> </table>	Heavys	0	451	9100	9551	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>Trucks</td><td>Heavys</td><td>Totals</td></tr> <tr> <td>916</td><td>27</td><td>0</td><td>943</td></tr> <tr> <td>7725</td><td>385</td><td>0</td><td>8110</td></tr> <tr> <td>1098</td><td>27</td><td>0</td><td>1125</td></tr> <tr> <td>9739</td><td>439</td><td>0</td><td></td></tr> </table>	Cars	Trucks	Heavys	Totals	916	27	0	943	7725	385	0	8110	1098	27	0	1125	9739	439	0						
Heavys	0	451	9100	9551																											
Cars	Trucks	Heavys	Totals																												
916	27	0	943																												
7725	385	0	8110																												
1098	27	0	1125																												
9739	439	0																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>Trucks</td><td>Cars</td><td>Totals</td></tr> <tr> <td>0</td><td>64</td><td>754</td><td>818</td></tr> <tr> <td>0</td><td>461</td><td>7875</td><td>8336</td></tr> <tr> <td>1</td><td>30</td><td>771</td><td>802</td></tr> <tr> <td>1</td><td>555</td><td>9400</td><td></td></tr> </table>	Heavys	Trucks	Cars	Totals	0	64	754	818	0	461	7875	8336	1	30	771	802	1	555	9400		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>Trucks</td><td>Heavys</td><td>Totals</td></tr> <tr> <td>9193</td><td>516</td><td>0</td><td>9709</td></tr> </table>	Cars	Trucks	Heavys	Totals	9193	516	0	9709		
Heavys	Trucks	Cars	Totals																												
0	64	754	818																												
0	461	7875	8336																												
1	30	771	802																												
1	555	9400																													
Cars	Trucks	Heavys	Totals																												
9193	516	0	9709																												
Peds Cross: 8 West Peds: 6 West Entering: 9956 West Leg Total: 19507	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>4181</td></tr> <tr> <td>Trucks</td><td>166</td></tr> <tr> <td>Heavys</td><td>1</td></tr> <tr> <td>Totals</td><td>4348</td></tr> </table>	Cars	4181	Trucks	166	Heavys	1	Totals	4348	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>794</td><td>2690</td><td>747</td><td>4231</td></tr> <tr> <td>Trucks</td><td>23</td><td>105</td><td>34</td><td>162</td></tr> <tr> <td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Totals</td><td>817</td><td>2795</td><td>781</td><td></td></tr> </table>	Cars	794	2690	747	4231	Trucks	23	105	34	162	Heavys	0	0	0	0	Totals	817	2795	781		Peds Cross: 2 South Peds: 39 South Entering: 4393 South Leg Total: 8741
Cars	4181																														
Trucks	166																														
Heavys	1																														
Totals	4348																														
Cars	794	2690	747	4231																											
Trucks	23	105	34	162																											
Heavys	0	0	0	0																											
Totals	817	2795	781																												

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Bovaird Dr

Count Date: 7-Nov-07

Municipality: Region of Peel

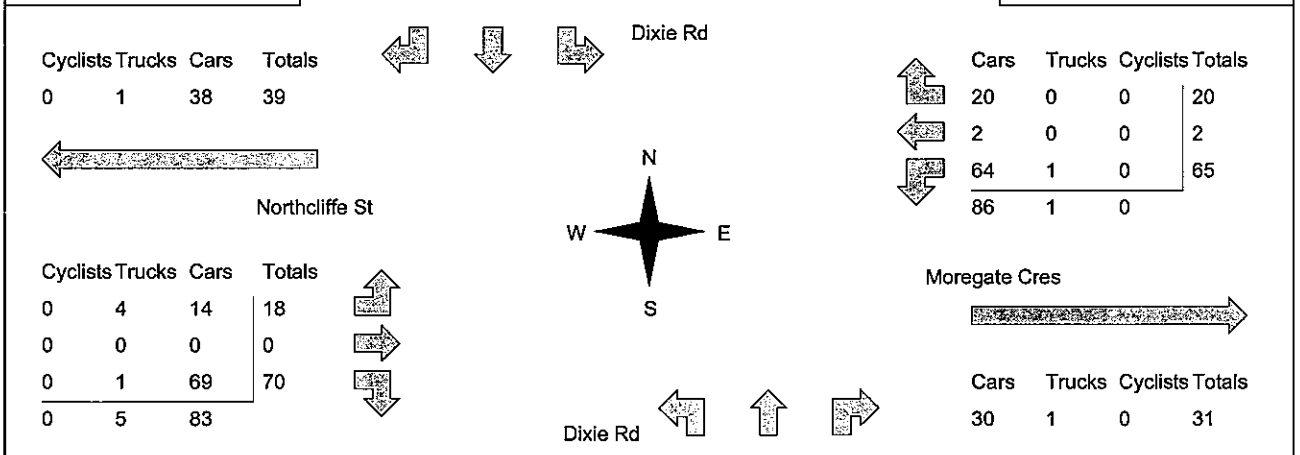
North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	145	616	103	864	3	1237	8:00:00	41	242	90	373	10
9:00:00	172	543	106	821	5	1154	9:00:00	73	174	86	333	6
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	38	162	86	286	3	654	12:00:00	113	169	86	368	4
13:00:00	41	180	73	294	1	702	13:00:00	92	224	92	408	3
14:00:00	59	197	75	331	1	743	14:00:00	96	219	97	412	4
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	71	303	75	449	4	1227	16:00:00	136	518	124	778	7
17:00:00	35	228	55	318	0	1163	17:00:00	122	622	101	845	2
18:00:00	31	192	51	274	2	1150	18:00:00	144	627	105	876	3
Totals:	592	2421	624	3637	19	8030		817	2795	781	4393	39
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	211	1057	69	1337	4	3236	8:00:00	86	1664	149	1899	1
9:00:00	218	1129	58	1405	0	3131	9:00:00	94	1484	148	1726	3
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	87	802	57	946	0	1849	12:00:00	75	727	101	903	1
13:00:00	99	884	50	1033	0	2019	13:00:00	82	784	120	986	0
14:00:00	112	834	61	1007	1	2039	14:00:00	95	835	102	1032	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	118	1149	147	1414	4	2592	16:00:00	135	977	66	1178	0
17:00:00	161	1150	266	1577	1	2738	17:00:00	121	980	60	1161	0
18:00:00	119	1105	235	1459	2	2530	18:00:00	130	885	56	1071	1
Totals:	1125	8110	943	10178	12	20134		818	8336	802	9956	6
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	1974	1807	971	1069		1047	1413	1434	1359			

The Region of This Area and Associated Places

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
Municipality: Region of Peel Site #: 0042282700 Intersection: Dixie Rd & Moregate Cres TFR File #: 1 Count date: 17-Oct-07	Weather conditions: Person(s) who counted:	

** Non-Signalized Intersection **	Major Road: Dixie Rd runs N/S
--	--------------------------------------

North Leg Total: 1581 North Entering: 1106 North Peds: 2 Peds Cross: 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>27</td><td>1</td><td>28</td></tr> <tr><td>Cars</td><td>21</td><td>1044</td><td>13</td><td>1078</td></tr> <tr><td>Totals</td><td>21</td><td>1071</td><td>14</td><td></td></tr> </table>	Cyclists	0	0	0	0	Trucks	0	27	1	28	Cars	21	1044	13	1078	Totals	21	1071	14		↑	Cyclists 0 Trucks 28 Cars 447 Totals 475	East Leg Total: 118 East Entering: 87 East Peds: 6 Peds Cross: 6
Cyclists	0	0	0	0																				
Trucks	0	27	1	28																				
Cars	21	1044	13	1078																				
Totals	21	1071	14																					



Peds Cross: 6 West Peds: 4 West Entering: 88 West Leg Total: 127	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1177</td></tr> <tr><td>Trucks</td><td>29</td></tr> <tr><td>Cyclists</td><td>0</td></tr> <tr><td>Totals</td><td>1206</td></tr> </table>	Cars	1177	Trucks	29	Cyclists	0	Totals	1206	↓	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>15</td><td>413</td><td>17</td><td>445</td></tr> <tr><td>Trucks</td><td>1</td><td>24</td><td>0</td><td>25</td></tr> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>16</td><td>437</td><td>17</td><td></td></tr> </table>	Cars	15	413	17	445	Trucks	1	24	0	25	Cyclists	0	0	0	0	Totals	16	437	17		Peds Cross: 6 South Peds: 0 South Entering: 470 South Leg Total: 1676
Cars	1177																															
Trucks	29																															
Cyclists	0																															
Totals	1206																															
Cars	15	413	17	445																												
Trucks	1	24	0	25																												
Cyclists	0	0	0	0																												
Totals	16	437	17																													

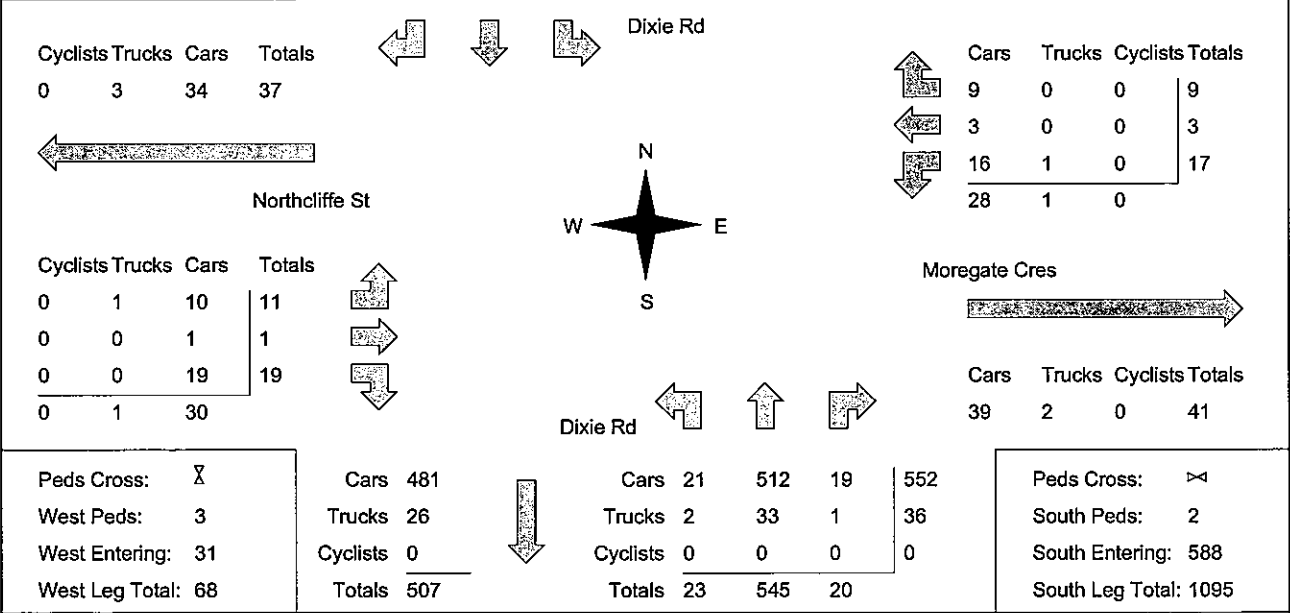
Comments

The Region of This Area and Associated Places

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
Municipality: Region of Peel Site #: 0042282700 Intersection: Dixie Rd & Moregate Cres TFR File #: 1 Count date: 17-Oct-07	Weather conditions: Person(s) who counted:	

**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1067 North Entering: 502 North Peds: 4 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>25</td><td>1</td><td>27</td></tr> <tr><td>Cars</td><td>10</td><td>446</td><td>19</td><td>475</td></tr> <tr><td>Totals</td><td>11</td><td>471</td><td>20</td><td></td></tr> </table>	Cyclists	0	0	0	0	Trucks	1	25	1	27	Cars	10	446	19	475	Totals	11	471	20		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td></tr> <tr><td>Trucks</td><td>34</td></tr> <tr><td>Cars</td><td>531</td></tr> <tr><td>Totals</td><td>565</td></tr> </table>	Cyclists	0	Trucks	34	Cars	531	Totals	565	East Leg Total: 70 East Entering: 29 East Peds: 8 Peds Cross: X
Cyclists	0	0	0	0																											
Trucks	1	25	1	27																											
Cars	10	446	19	475																											
Totals	11	471	20																												
Cyclists	0																														
Trucks	34																														
Cars	531																														
Totals	565																														



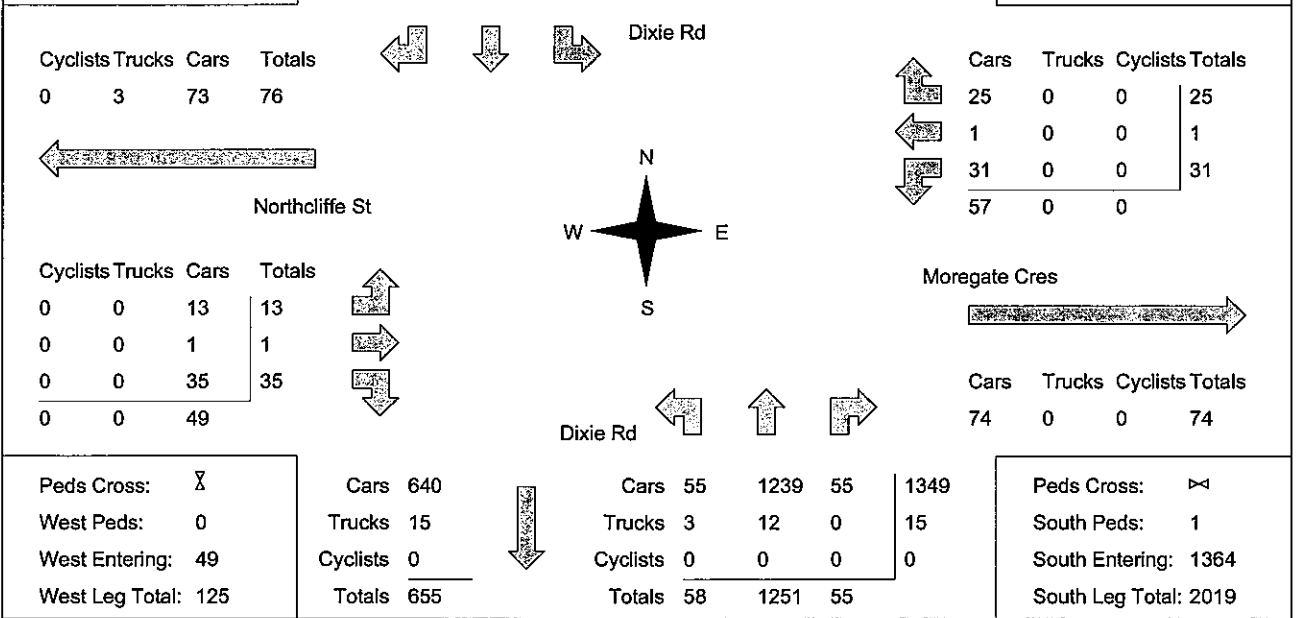
Comments

The Region of This Area and Associated Places

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 17:00:00 To: 18:00:00
Municipality: Region of Peel Site #: 0042282700 Intersection: Dixie Rd & Moregate Cres TFR File #: 1 Count date: 17-Oct-07	Weather conditions: Person(s) who counted:	

**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1913 North Entering: 624 North Peds: 0 Peds Cross: ><	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>15</td><td>0</td><td>15</td></tr> <tr><td>Cars</td><td>17</td><td>574</td><td>18</td><td>609</td></tr> <tr><td>Totals</td><td>17</td><td>589</td><td>18</td><td></td></tr> </table>	Cyclists	0	0	0	0	Trucks	0	15	0	15	Cars	17	574	18	609	Totals	17	589	18		↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td></tr> <tr><td>Trucks</td><td>12</td></tr> <tr><td>Cars</td><td>1277</td></tr> <tr><td>Totals</td><td>1289</td></tr> </table>	Cyclists	0	Trucks	12	Cars	1277	Totals	1289	East Leg Total: 131 East Entering: 57 East Peds: 1 Peds Cross: X
Cyclists	0	0	0	0																												
Trucks	0	15	0	15																												
Cars	17	574	18	609																												
Totals	17	589	18																													
Cyclists	0																															
Trucks	12																															
Cars	1277																															
Totals	1289																															



Comments

The Region of This Area and Associated Places

Total Count Diagram

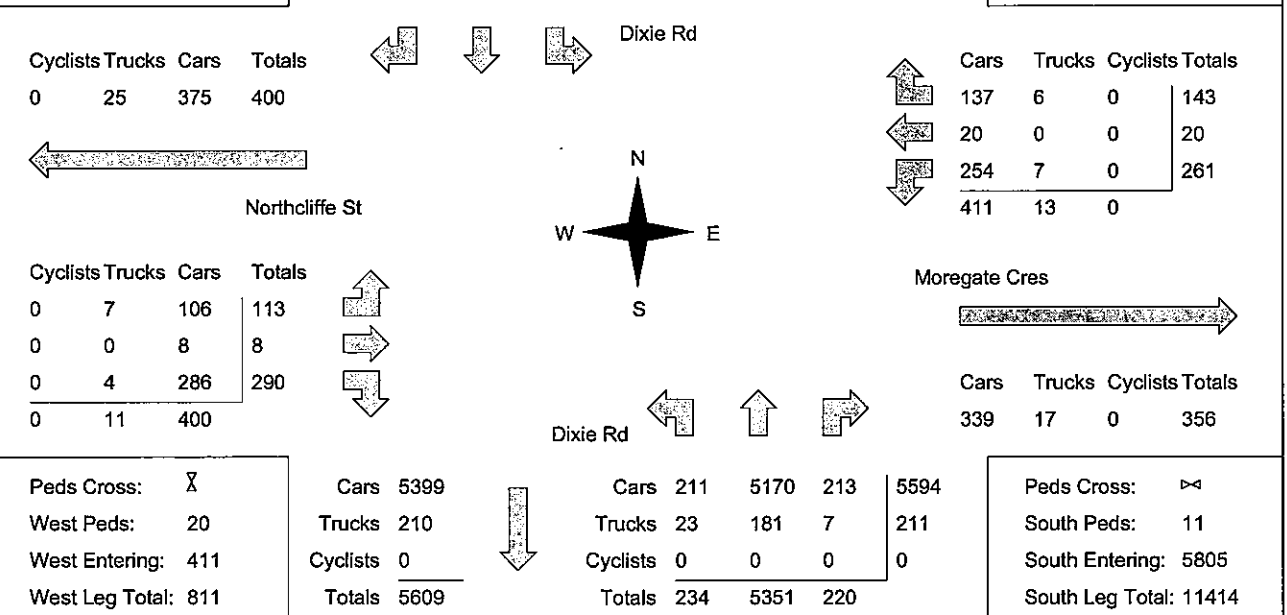
Municipality: Region of Peel
Site #: 0042282700
Intersection: Dixie Rd & Moregate Cres
TFR File #: 1
Count date: 17-Oct-07

Weather conditions:
Person(s) who counted:

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

Major Road: Dixie Rd runs N/S

North Leg Total: 10939	Cyclists 0	0	0	0	Cyclists 0	East Leg Total: 780
North Entering: 5332	Trucks 2	199	10	211	Trucks 194	East Entering: 424
North Peds: 12	Cars 144	4859	118	5121	Cars 5413	East Peds: 40
Peds Cross: ><	Totals 146	5058	128		Totals 5607	Peds Cross: X



Comments

The Region of This Area and Associated Places Traffic Count Summary

Intersection: Dixie Rd & Moregate Cres						Count Date: 17-Oct-07		Municipality: Region of Peel					
North Approach Totals						North/South Total Approaches	South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0	
8:00:00	11	963	16	990	2	1389	8:00:00	12	367	20	399	0	
9:00:00	14	1005	17	1036	2	1522	9:00:00	21	451	14	486	0	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0	
12:00:00	18	487	18	523	1	949	12:00:00	27	381	18	426	0	
13:00:00	16	424	20	460	0	949	13:00:00	18	458	13	489	2	
14:00:00	20	471	11	502	4	1090	14:00:00	23	545	20	588	2	
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0	
16:00:00	15	555	26	596	1	1481	16:00:00	30	828	27	885	3	
17:00:00	16	564	21	601	2	1769	17:00:00	45	1070	53	1168	3	
18:00:00	18	589	17	624	0	1988	18:00:00	58	1251	55	1364	1	
Totals:	128	5058	146	5332	12	11137		234	5351	220	5805	11	
East Approach Totals						East/West Total Approaches	West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds		Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total		
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0	
8:00:00	60	0	22	82	3	154	8:00:00	17	1	54	72	6	
9:00:00	61	4	19	84	6	182	9:00:00	22	0	76	98	3	
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0	
12:00:00	18	2	13	33	6	82	12:00:00	14	0	35	49	3	
13:00:00	22	3	11	36	9	60	13:00:00	6	1	17	24	1	
14:00:00	17	3	9	29	8	60	14:00:00	11	1	19	31	3	
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0	
16:00:00	17	5	17	39	3	83	16:00:00	16	3	25	44	2	
17:00:00	35	2	27	64	4	108	17:00:00	14	1	29	44	2	
18:00:00	31	1	25	57	1	106	18:00:00	13	1	35	49	0	
Totals:	261	20	143	424	40	835		113	8	290	411	20	
Calculated Values for Traffic Crossing Major Street													
Hours Ending:	8:00	9:00	12:00	13:00			14:00	16:00	17:00	18:00			
Crossing Values:	80	89	35	33			37	42	56	46			

The Region of This Area and Associated Places

Count Date: 17-Oct-07

Intersection: Dixie Rd & Moregate Cres

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #1: Minimum Vehicular Volumes.

A. All Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way		2 Lanes Each Way		3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1543	1704	1031	1009	1150	1564	1877	2094	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0

Total:	800
Actual Average (Total/8):	100%

B. Minor Street Both Approaches.

100%	120	170	120	170	170									100%
80%	95	135	95	135	135	154	182	82	60	60	83	108	106	Yes: X No:
Minor Street Both Approaches	100% Fulfilled						100							100
	80% Fulfilled					80								80
	Actual % if Below 80%							48	35	35	49	64	62	294

Total:	474
Actual Average (Total/8):	59%

The Region of This Area and Associated Places

Count Date: 17-Oct-07

Intersection: Dixie Rd & Moregate Cres

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #2: Delay to Cross Traffic.

A. Major Street Both Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1389	1522	949	949	1090	1481	1769	1988	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0

Total:	800
Actual Average (Total/8):	100%

B. Traffic Crossing Major Street.

100%	50	75	50	75	75									100%
80%	40	60	40	60	60	80	89	35	33	37	42	56	46	Yes: X No:
All Approaches	100% Fulfilled					100	100							200
	80% Fulfilled													0
	Actual % if Below 80%							47	44	49	56	75	61	332

Total:	532
Actual Average (Total/8):	67%

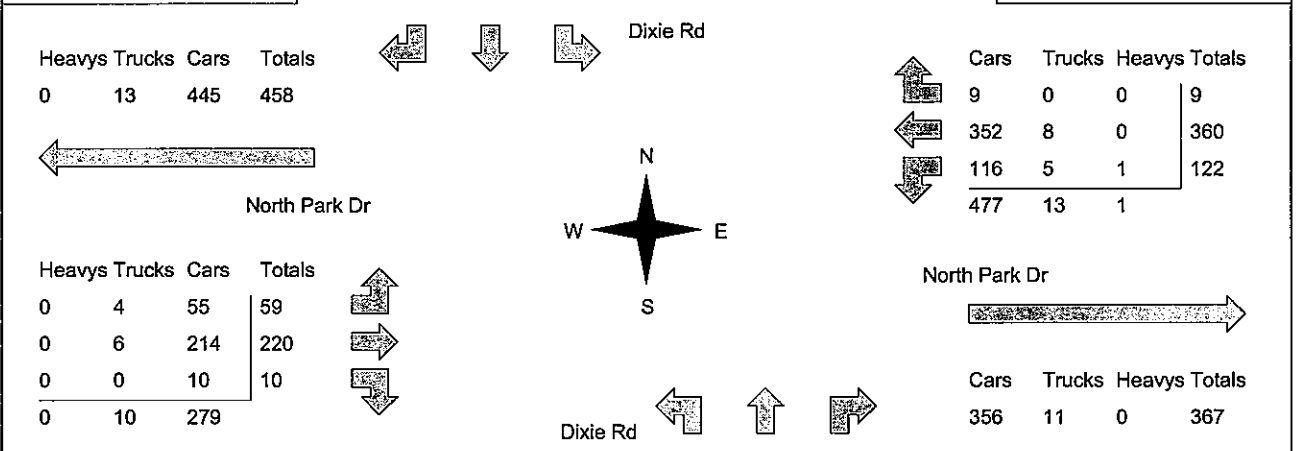
Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 8:00:00 To: 9:00:00
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Municipality: Region of Peel Site #: 0042245213 Intersection: Dixie Rd & North Park Dr TFR File #: 1 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 1425 North Entering: 1117 North Peds: 0 Peds Cross: 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>4</td><td>20</td><td>2</td><td>26</td></tr> <tr><td>Cars</td><td>64</td><td>922</td><td>105</td><td>1091</td></tr> <tr><td>Totals</td><td>68</td><td>942</td><td>107</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	4	20	2	26	Cars	64	922	105	1091	Totals	68	942	107		 Heavys 3 Trucks 29 Cars 276 Totals 308	East Leg Total: 858 East Entering: 491 East Peds: 0 Peds Cross: 1
Heavys	0	0	0	0																			
Trucks	4	20	2	26																			
Cars	64	922	105	1091																			
Totals	68	942	107																				



Peds Cross: 1 West Peds: 0 West Entering: 289 West Leg Total: 747	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1048</td></tr> <tr><td>Trucks</td><td>25</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td>1074</td></tr> </table>	Cars	1048	Trucks	25	Heavys	1	Totals	1074	 Cars 29 212 37 278 Trucks 1 25 3 29 Heavys 0 3 0 3 Totals 30 240 40	Peds Cross: 2 South Peds: 19 South Entering: 310 South Leg Total: 1384
Cars	1048										
Trucks	25										
Heavys	1										
Totals	1074										

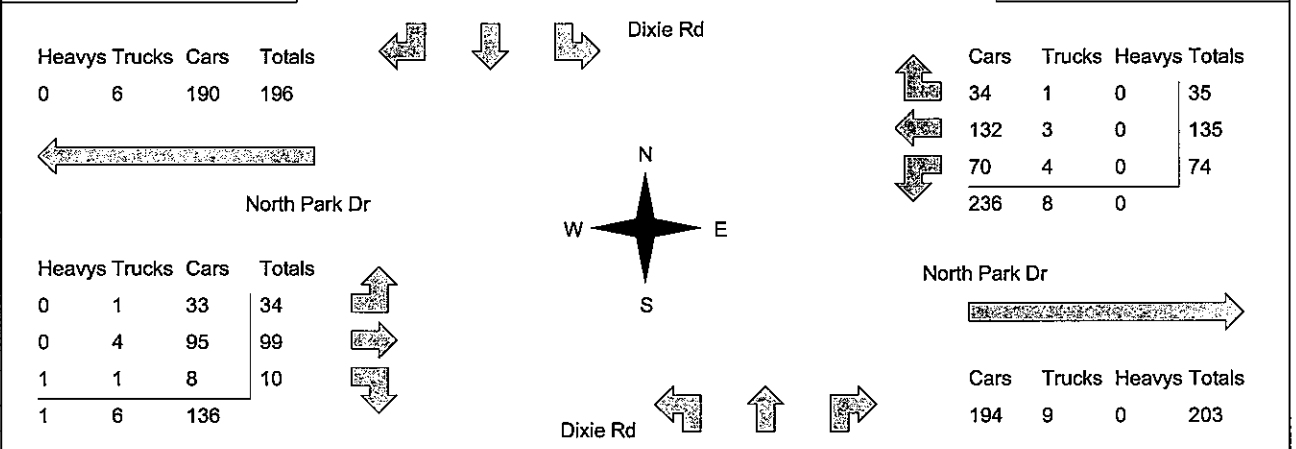
Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 12:15:00 To: 13:15:00
Municipality: Region of Peel Site #: 0042245213 Intersection: Dixie Rd & North Park Dr TFR File #: 1 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 855 North Entering: 462 North Peds: 0 Peds Cross: 2	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>25</td><td>1</td><td>27</td></tr> <tr><td>Cars</td><td>32</td><td>361</td><td>42</td><td>435</td></tr> <tr><td>Totals</td><td>33</td><td>386</td><td>43</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	25	1	27	Cars	32	361	42	435	Totals	33	386	43		↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Cars</td><td>369</td></tr> <tr><td>Totals</td><td>393</td></tr> </table>	Heavys	1	Trucks	23	Cars	369	Totals	393	East Leg Total: 447 East Entering: 244 East Peds: 0 Peds Cross: 8
Heavys	0	0	0	0																												
Trucks	1	25	1	27																												
Cars	32	361	42	435																												
Totals	33	386	43																													
Heavys	1																															
Trucks	23																															
Cars	369																															
Totals	393																															



Peds Cross: 8 West Peds: 1 West Entering: 143 West Leg Total: 339	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>439</td></tr> <tr><td>Trucks</td><td>30</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td>470</td></tr> </table>	Cars	439	Trucks	30	Heavys	1	Totals	470	↓	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>26</td><td>302</td><td>57</td><td>385</td></tr> <tr><td>Trucks</td><td>2</td><td>21</td><td>4</td><td>27</td></tr> <tr><td>Heavys</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Totals</td><td>28</td><td>324</td><td>61</td><td></td></tr> </table>	Cars	26	302	57	385	Trucks	2	21	4	27	Heavys	0	1	0	1	Totals	28	324	61		Peds Cross: 2 South Peds: 19 South Entering: 413 South Leg Total: 883
Cars	439																															
Trucks	30																															
Heavys	1																															
Totals	470																															
Cars	26	302	57	385																												
Trucks	2	21	4	27																												
Heavys	0	1	0	1																												
Totals	28	324	61																													

Comments

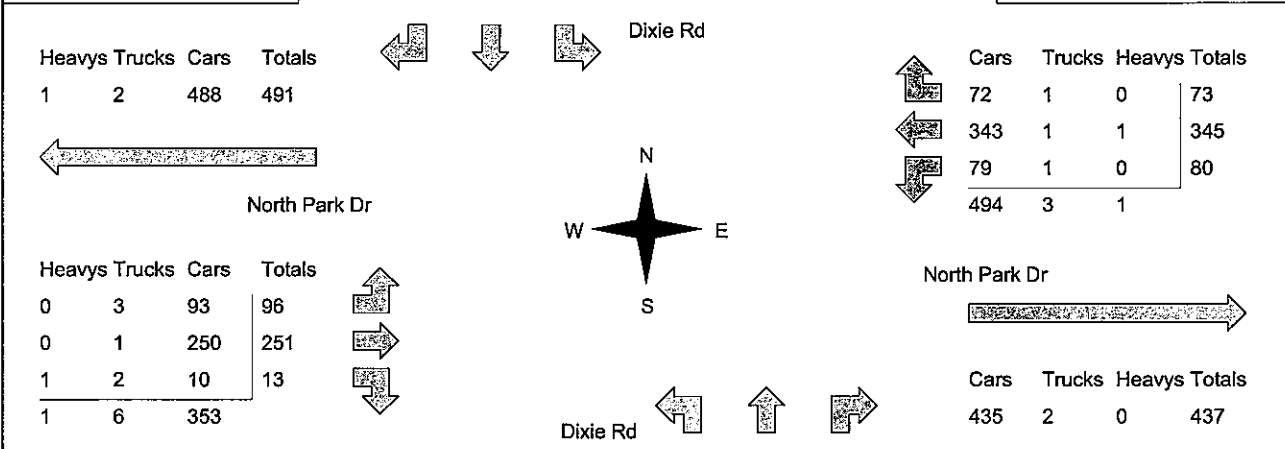
Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:30:00 To: 17:30:00
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Municipality: Region of Peel Site #: 0042245213 Intersection: Dixie Rd & North Park Dr TFR File #: 1 Count date: 13-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 1791 North Entering: 658 North Peds: 0 Peds Cross: ∞	<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>20</td><td>1</td><td>22</td></tr> <tr><td>Cars</td><td>54</td><td>526</td><td>56</td><td>636</td></tr> <tr><td>Totals</td><td>55</td><td>546</td><td>57</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	20	1	22	Cars	54	526	56	636	Totals	55	546	57		<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>20</td></tr> <tr><td>Cars</td><td>1113</td></tr> <tr><td>Totals</td><td>1133</td></tr> </table>	Heavys	0	Trucks	20	Cars	1113	Totals	1133	East Leg Total: 935 East Entering: 498 East Peds: 0 Peds Cross: ∞
Heavys	0	0	0	0																											
Trucks	1	20	1	22																											
Cars	54	526	56	636																											
Totals	55	546	57																												
Heavys	0																														
Trucks	20																														
Cars	1113																														
Totals	1133																														



Peds Cross: ∞ West Peds: 0 West Entering: 360 West Leg Total: 851	<table style="margin: auto;"> <tr><td>Cars</td><td>615</td></tr> <tr><td>Trucks</td><td>23</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td>639</td></tr> </table>	Cars	615	Trucks	23	Heavys	1	Totals	639	<table style="margin: auto;"> <tr><td>Cars</td><td>91</td><td>948</td><td>129</td><td>1168</td></tr> <tr><td>Trucks</td><td>0</td><td>16</td><td>0</td><td>16</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>91</td><td>964</td><td>129</td><td></td></tr> </table>	Cars	91	948	129	1168	Trucks	0	16	0	16	Heavys	0	0	0	0	Totals	91	964	129		Peds Cross: ∞ South Peds: 14 South Entering: 1184 South Leg Total: 1823
Cars	615																														
Trucks	23																														
Heavys	1																														
Totals	639																														
Cars	91	948	129	1168																											
Trucks	0	16	0	16																											
Heavys	0	0	0	0																											
Totals	91	964	129																												

Comments

Ontario Traffic Inc

Total Count Diagram

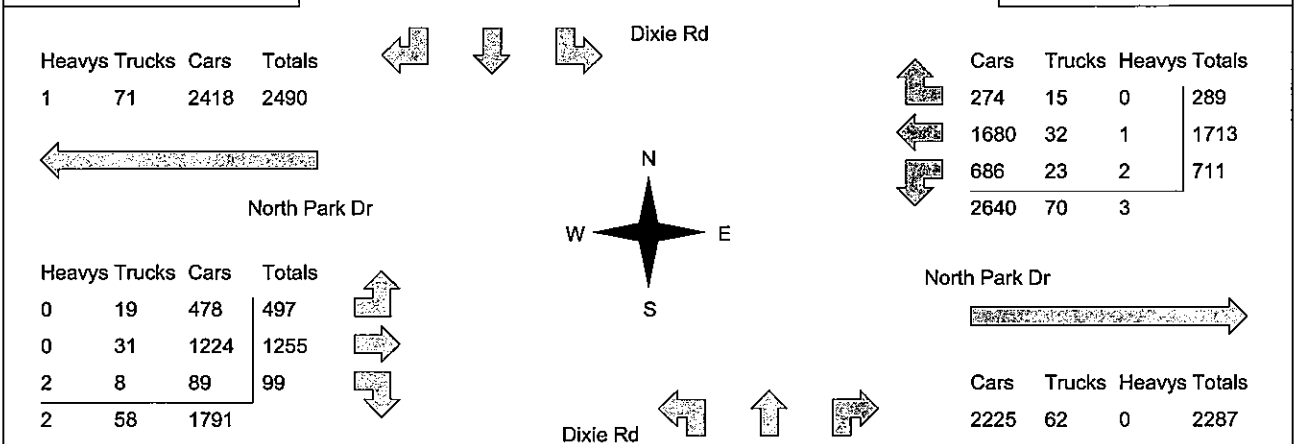
Municipality: Region of Peel
Site #: 0042245213
Intersection: Dixie Rd & North Park Dr
TFR File #: 1
Count date: 13-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 10145 North Entering: 5335 North Peds: 0 Peds Cross: ⇌	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Heavys</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr> <td>Trucks</td><td>20</td><td>191</td><td>12</td><td>223</td></tr> <tr> <td>Cars</td><td>327</td><td>4376</td><td>408</td><td>5111</td></tr> <tr> <td>Totals</td><td>347</td><td>4568</td><td>420</td><td></td></tr> </table>	Heavys	0	1	0	1	Trucks	20	191	12	223	Cars	327	4376	408	5111	Totals	347	4568	420		↑	Heavys 5 Trucks 209 Cars 4596 Totals 4810	East Leg Total: 5000 East Entering: 2713 East Peds: 0 Peds Cross: ⌘
Heavys	0	1	0	1																				
Trucks	20	191	12	223																				
Cars	327	4376	408	5111																				
Totals	347	4568	420																					



Peds Cross: ⌘ West Peds: 2 West Entering: 1851 West Leg Total: 4341	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Cars</td><td>5151</td> <td>Cars</td><td>411</td><td>3844</td><td>593</td><td>4848</td> </tr> <tr> <td>Trucks</td><td>222</td> <td>Trucks</td><td>19</td><td>175</td><td>19</td><td>213</td> </tr> <tr> <td>Heavys</td><td>5</td> <td>Heavys</td><td>0</td><td>5</td><td>0</td><td>5</td> </tr> <tr> <td>Totals</td><td>5378</td> <td>Totals</td><td>430</td><td>4024</td><td>612</td><td></td> </tr> </table>	Cars	5151	Cars	411	3844	593	4848	Trucks	222	Trucks	19	175	19	213	Heavys	5	Heavys	0	5	0	5	Totals	5378	Totals	430	4024	612		↓	Peds Cross: ⇌ South Peds: 140 South Entering: 5066 South Leg Total: 10444
Cars	5151	Cars	411	3844	593	4848																									
Trucks	222	Trucks	19	175	19	213																									
Heavys	5	Heavys	0	5	0	5																									
Totals	5378	Totals	430	4024	612																										

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & North Park Dr

Count Date: 13-Nov-07

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	64	1020	39	1123	0	1414	8:00:00	18	256	17	291	13
9:00:00	107	942	68	1117	0	1427	9:00:00	30	240	40	310	19
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	19	347	29	395	0	784	12:00:00	37	289	63	389	9
13:00:00	33	352	30	415	0	828	13:00:00	22	325	66	413	16
14:00:00	41	364	33	438	0	886	14:00:00	33	363	52	448	11
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	48	501	47	596	0	1452	16:00:00	75	657	124	856	43
17:00:00	53	468	59	580	0	1699	17:00:00	96	903	120	1119	15
18:00:00	55	574	42	671	0	1911	18:00:00	119	991	130	1240	14
Totals:	420	4568	347	5335	0	10401		430	4024	612	5066	140
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	129	167	12	308	0	500	8:00:00	50	129	13	192	0
9:00:00	122	360	9	491	0	780	9:00:00	59	220	10	289	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	73	101	23	197	0	330	12:00:00	33	82	18	133	0
13:00:00	67	120	31	218	0	360	13:00:00	36	95	11	142	0
14:00:00	62	109	35	206	0	348	14:00:00	37	99	6	142	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	87	223	43	353	0	651	16:00:00	94	188	16	298	0
17:00:00	92	330	79	501	0	816	17:00:00	77	219	19	315	1
18:00:00	79	303	57	439	0	779	18:00:00	111	223	6	340	0
Totals:	711	1713	289	2713	0	4564		497	1255	99	1851	2
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00			14:00	16:00	17:00	18:00		
Crossing Values:	359	560	216	239			219	447	514	507		

Ontario Traffic Inc

Morning Peak Diagram

Specified Period

From: 7:00:00
To: 9:00:00

One Hour Peak

From: 7:30:00
To: 8:30:00

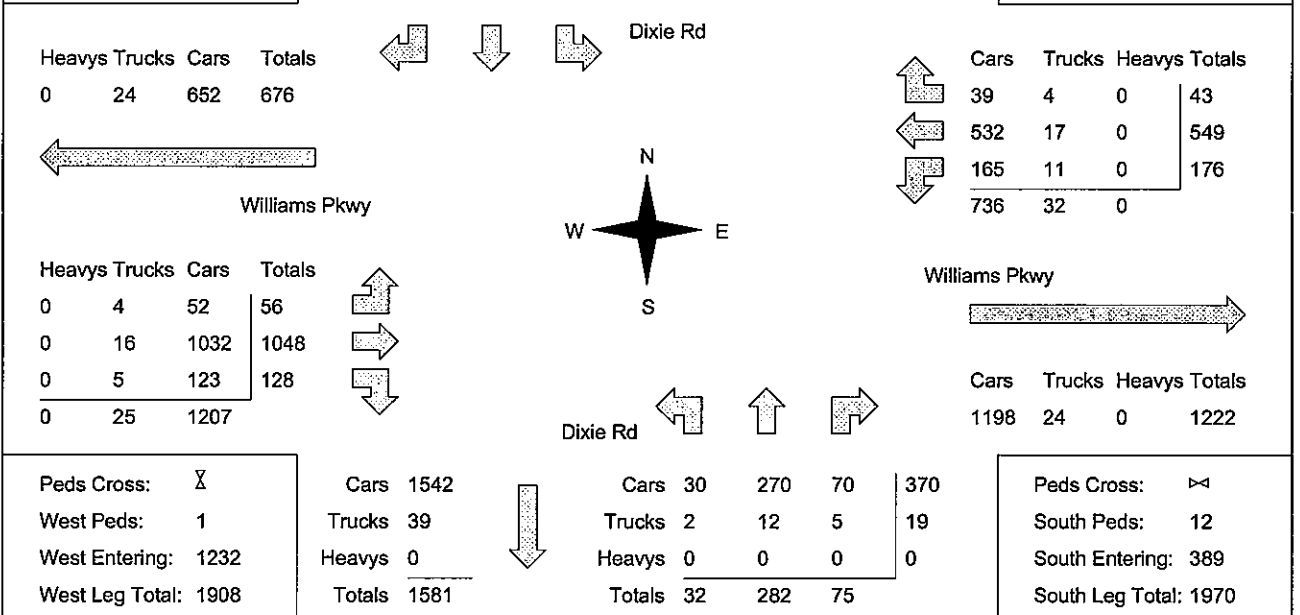
Municipality: Region of Peel
Site #: 0042175300
Intersection: Dixie Rd & Williams Pkwy
TFR File #: 1
Count date: 6-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 1852 North Entering: 1471 North Peds: 16 Peds Cross: ><	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>5</td><td>23</td><td>3</td><td>31</td></tr> <tr><td>Cars</td><td>90</td><td>1254</td><td>96</td><td>1440</td></tr> <tr><td>Totals</td><td>95</td><td>1277</td><td>99</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	5	23	3	31	Cars	90	1254	96	1440	Totals	95	1277	99			Heavys 0 Trucks 20 Cars 361 Totals 381	East Leg Total: 1990 East Entering: 768 East Peds: 2 Peds Cross: X
Heavys	0	0	0	0																				
Trucks	5	23	3	31																				
Cars	90	1254	96	1440																				
Totals	95	1277	99																					



Comments

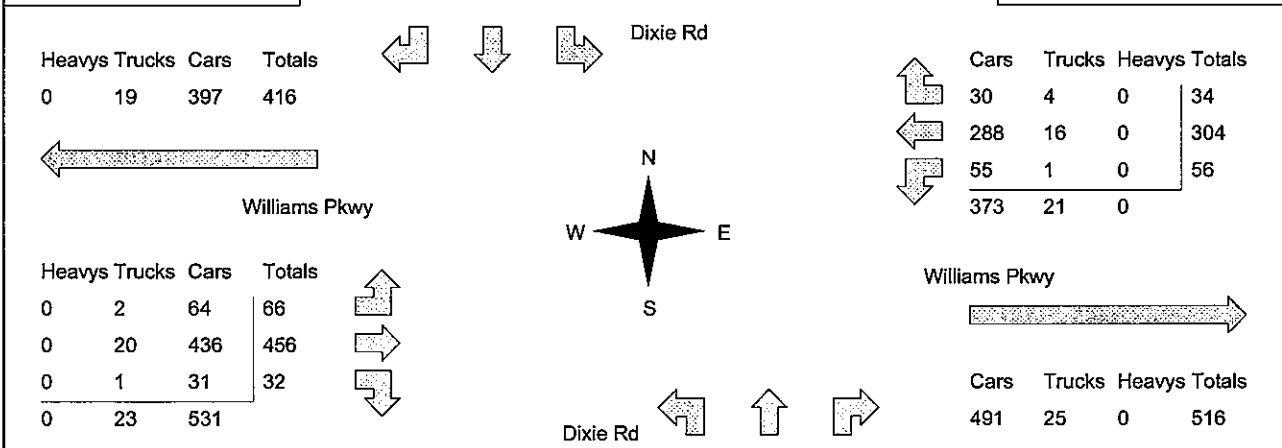
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
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Municipality: Region of Peel Site #: 0042175300 Intersection: Dixie Rd & Williams Pkwy TFR File #: 1 Count date: 6-Nov-07	Weather conditions: Person(s) who counted:
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**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 993 North Entering: 498 North Peds: 6 Peds Cross: ><	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>3</td><td>20</td><td>2</td><td>25</td></tr> <tr><td>Cars</td><td>58</td><td>392</td><td>23</td><td>473</td></tr> <tr><td>Totals</td><td>61</td><td>412</td><td>25</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	3	20	2	25	Cars	58	392	23	473	Totals	61	412	25			<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>18</td></tr> <tr><td>Cars</td><td>477</td></tr> <tr><td>Totals</td><td>495</td></tr> </table>	Heavys	0	Trucks	18	Cars	477	Totals	495	East Leg Total: 910 East Entering: 394 East Peds: 3 Peds Cross: X
Heavys	0	0	0	0																												
Trucks	3	20	2	25																												
Cars	58	392	23	473																												
Totals	61	412	25																													
Heavys	0																															
Trucks	18																															
Cars	477																															
Totals	495																															



Peds Cross: X West Peds: 1 West Entering: 554 West Leg Total: 970	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>478</td></tr> <tr><td>Trucks</td><td>22</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>500</td></tr> </table>	Cars	478	Trucks	22	Heavys	0	Totals	500		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>51</td><td>383</td><td>32</td><td>466</td></tr> <tr><td>Trucks</td><td>0</td><td>12</td><td>3</td><td>15</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>51</td><td>395</td><td>35</td><td></td></tr> </table>	Cars	51	383	32	466	Trucks	0	12	3	15	Heavys	0	0	0	0	Totals	51	395	35		Peds Cross: >< South Peds: 1 South Entering: 481 South Leg Total: 981
Cars	478																															
Trucks	22																															
Heavys	0																															
Totals	500																															
Cars	51	383	32	466																												
Trucks	0	12	3	15																												
Heavys	0	0	0	0																												
Totals	51	395	35																													

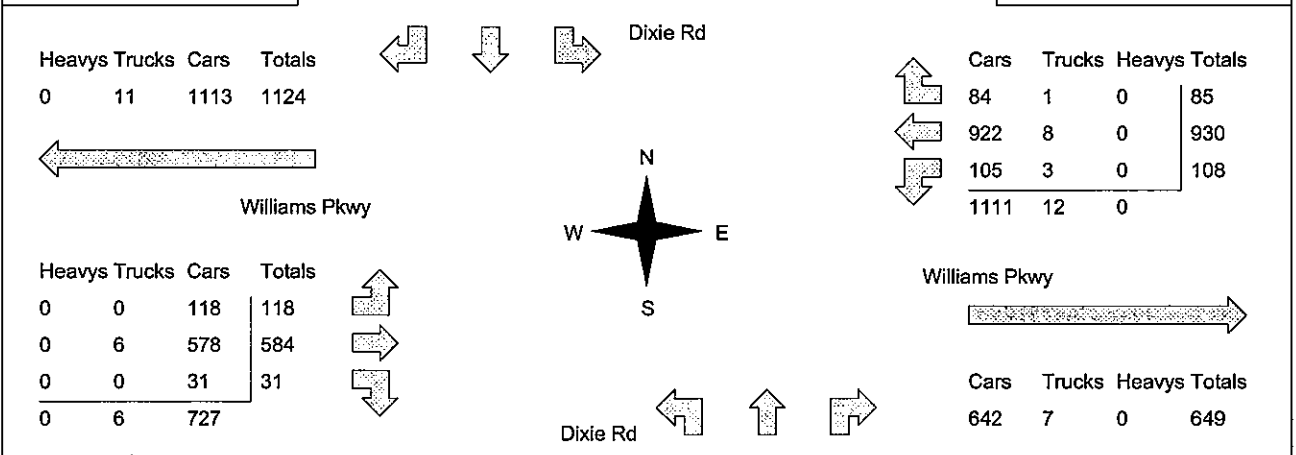
Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:45:00 To: 17:45:00
Municipality: Region of Peel Site #: 0042175300 Intersection: Dixie Rd & Williams Pkwy TFR File #: 1 Count date: 6-Nov-07	Weather conditions: Person(s) who counted:	

** Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 1933 North Entering: 545 North Peds: 0 Peds Cross: ><	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>13</td><td>0</td><td>13</td></tr> <tr><td>Cars</td><td>41</td><td>467</td><td>24</td><td>532</td></tr> <tr><td>Totals</td><td>41</td><td>480</td><td>24</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	13	0	13	Cars	41	467	24	532	Totals	41	480	24		<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>13</td></tr> <tr><td>Cars</td><td>1375</td></tr> <tr><td>Totals</td><td>1388</td></tr> </table>	Heavys	0	Trucks	13	Cars	1375	Totals	1388	East Leg Total: 1772 East Entering: 1123 East Peds: 4 Peds Cross: X
Heavys	0	0	0	0																											
Trucks	0	13	0	13																											
Cars	41	467	24	532																											
Totals	41	480	24																												
Heavys	0																														
Trucks	13																														
Cars	1375																														
Totals	1388																														



Peds Cross: X West Peds: 2 West Entering: 733 West Leg Total: 1857	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>603</td></tr> <tr><td>Trucks</td><td>16</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>619</td></tr> </table>	Cars	603	Trucks	16	Heavys	0	Totals	619	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>150</td><td>1173</td><td>40</td><td>1363</td></tr> <tr><td>Trucks</td><td>3</td><td>12</td><td>1</td><td>16</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>153</td><td>1185</td><td>41</td><td></td></tr> </table>	Cars	150	1173	40	1363	Trucks	3	12	1	16	Heavys	0	0	0	0	Totals	153	1185	41		Peds Cross: >< South Peds: 2 South Entering: 1379 South Leg Total: 1998
Cars	603																														
Trucks	16																														
Heavys	0																														
Totals	619																														
Cars	150	1173	40	1363																											
Trucks	3	12	1	16																											
Heavys	0	0	0	0																											
Totals	153	1185	41																												

Comments

Ontario Traffic Inc

Total Count Diagram

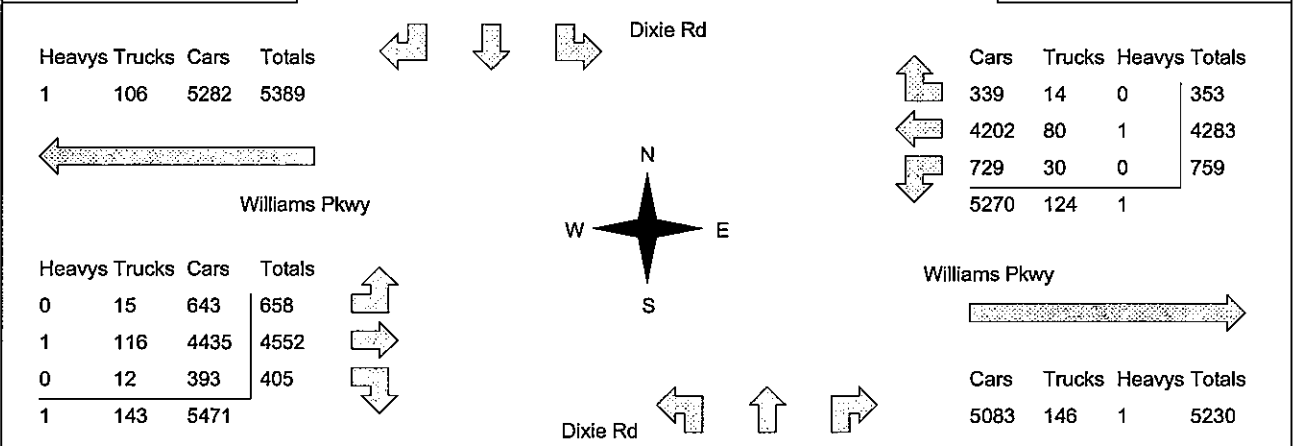
Municipality: Region of Peel
Site #: 0042175300
Intersection: Dixie Rd & Williams Pkwy
TFR File #: 1
Count date: 6-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 11853 North Entering: 6116 North Peds: 65 Peds Cross: \bowtie	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Trucks</td><td>16</td><td>143</td><td>8</td><td>167</td></tr> <tr><td>Cars</td><td>529</td><td>5066</td><td>353</td><td>5948</td></tr> <tr><td>Totals</td><td>545</td><td>5210</td><td>361</td><td></td></tr> </table>	Heavys	0	1	0	1	Trucks	16	143	8	167	Cars	529	5066	353	5948	Totals	545	5210	361			Heavys 0 Trucks 147 Cars 5590 Totals 5737	East Leg Total: 10625 East Entering: 5395 East Peds: 26 Peds Cross: \bowtie
Heavys	0	1	0	1																				
Trucks	16	143	8	167																				
Cars	529	5066	353	5948																				
Totals	545	5210	361																					



Peds Cross: \bowtie West Peds: 29 West Entering: 5615 West Leg Total: 11004	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>6188</td></tr> <tr><td>Trucks</td><td>185</td></tr> <tr><td>Heavys</td><td>1</td></tr> <tr><td>Totals</td><td>6374</td></tr> </table>	Cars	6188	Trucks	185	Heavys	1	Totals	6374	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>551</td><td>4608</td><td>295</td><td>5454</td></tr> <tr><td>Trucks</td><td>10</td><td>118</td><td>22</td><td>150</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>561</td><td>4726</td><td>317</td><td></td></tr> </table>	Cars	551	4608	295	5454	Trucks	10	118	22	150	Heavys	0	0	0	0	Totals	561	4726	317		Peds Cross: \bowtie South Peds: 38 South Entering: 5604 South Leg Total: 11978
Cars	6188																														
Trucks	185																														
Heavys	1																														
Totals	6374																														
Cars	551	4608	295	5454																											
Trucks	10	118	22	150																											
Heavys	0	0	0	0																											
Totals	561	4726	317																												

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Williams Pkwy

Count Date: 6-Nov-07

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	88	1271	94	1453	6	1796	8:00:00	32	271	40	343	6
9:00:00	81	1141	108	1330	14	1709	9:00:00	28	280	71	379	9
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	25	436	63	524	1	937	12:00:00	36	354	23	413	0
13:00:00	40	451	44	535	8	1022	13:00:00	52	397	38	487	1
14:00:00	25	412	61	498	6	979	14:00:00	51	395	35	481	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	44	576	73	693	26	1609	16:00:00	101	784	31	916	18
17:00:00	33	426	50	509	3	1681	17:00:00	108	1022	42	1172	1
18:00:00	25	497	52	574	1	1987	18:00:00	153	1223	37	1413	2
Totals:	361	5210	545	6116	65	11720		561	4726	317	5604	38

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	152	448	14	614	1	1745	8:00:00	43	990	98	1131	1
9:00:00	150	528	53	731	2	1750	9:00:00	57	862	100	1019	3
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	54	309	30	393	0	746	12:00:00	47	276	30	353	2
13:00:00	61	286	23	370	1	753	13:00:00	60	291	32	383	1
14:00:00	56	304	34	394	3	948	14:00:00	66	456	32	554	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	86	619	56	761	10	1487	16:00:00	113	569	44	726	4
17:00:00	114	966	61	1141	5	1836	17:00:00	130	525	40	695	16
18:00:00	86	823	82	991	4	1745	18:00:00	142	583	29	754	1
Totals:	759	4283	353	5395	26	11010		658	4552	405	5615	29

Calculated Values for Traffic Crossing Major Street									
Hours Ending:	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
Crossing Values:	1197	1092	411	421	585	862	1214	1054	

Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
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Municipality: Region of Peel Site #: 0042140900 Intersection: Dixie Rd & Lascelles Blvd TFR File #: 2 Count date: 15-Nov-07	Weather conditions: Person(s) who counted:
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** Non-Signalized Intersection **	Major Road: Dixie Rd runs N/S
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North Leg Total: 1983 North Entering: 1556 North Peds: 0 Peds Cross: ☒	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Heavys 0 0</td> <td style="width: 50%;">0</td> </tr> <tr> <td>Trucks 4 39</td> <td>43</td> </tr> <tr> <td>Cars 30 1483</td> <td>1513</td> </tr> <tr> <td>Totals 34 1522</td> <td></td> </tr> </table>	Heavys 0 0	0	Trucks 4 39	43	Cars 30 1483	1513	Totals 34 1522		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Heavys 0</td> <td style="width: 50%;">0</td> </tr> <tr> <td>Trucks 27</td> <td>27</td> </tr> <tr> <td>Cars 400</td> <td>400</td> </tr> <tr> <td>Totals 427</td> <td></td> </tr> </table>	Heavys 0	0	Trucks 27	27	Cars 400	400	Totals 427																																										
Heavys 0 0	0																																																										
Trucks 4 39	43																																																										
Cars 30 1483	1513																																																										
Totals 34 1522																																																											
Heavys 0	0																																																										
Trucks 27	27																																																										
Cars 400	400																																																										
Totals 427																																																											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%;">Totals</td> <td></td> </tr> <tr> <td>0</td> <td>4</td> <td>47</td> <td>51</td> <td style="text-align: center;">←</td> </tr> </table>	Heavys	Trucks	Cars	Totals		0	4	47	51	←	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Cars</td> <td style="width: 15%;">Totals</td> <td></td> </tr> <tr> <td>0</td> <td>3</td> <td>39</td> <td>42</td> <td style="text-align: center;">↑</td> </tr> <tr> <td>0</td> <td>1</td> <td>76</td> <td>77</td> <td style="text-align: center;">↓</td> </tr> <tr> <td>0</td> <td>4</td> <td>115</td> <td></td> <td style="text-align: center;">↔</td> </tr> </table>	Heavys	Trucks	Cars	Totals		0	3	39	42	↑	0	1	76	77	↓	0	4	115		↔	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Cars</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Totals</td> <td></td> </tr> <tr> <td>1559</td> <td>40</td> <td>0</td> <td>1599</td> <td style="text-align: center;">↓</td> </tr> </table>	Cars	Trucks	Heavys	Totals		1559	40	0	1599	↓	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Cars</td> <td style="width: 15%;">Trucks</td> <td style="width: 15%;">Heavys</td> <td style="width: 15%;">Totals</td> <td></td> </tr> <tr> <td>17</td> <td>0</td> <td>0</td> <td>17</td> <td style="text-align: center;">↔</td> </tr> <tr> <td>361</td> <td>24</td> <td>0</td> <td>385</td> <td style="text-align: center;">↑</td> </tr> </table>	Cars	Trucks	Heavys	Totals		17	0	0	17	↔	361	24	0	385	↑	Peds Cross: ☒ South Peds: 0 South Entering: 402 South Leg Total: 2001
Heavys	Trucks	Cars	Totals																																																								
0	4	47	51	←																																																							
Heavys	Trucks	Cars	Totals																																																								
0	3	39	42	↑																																																							
0	1	76	77	↓																																																							
0	4	115		↔																																																							
Cars	Trucks	Heavys	Totals																																																								
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Cars	Trucks	Heavys	Totals																																																								
17	0	0	17	↔																																																							
361	24	0	385	↑																																																							

Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 11:30:00 To: 12:30:00
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Municipality: Region of Peel Site #: 0042140900 Intersection: Dixie Rd & Lascelles Blvd TFR File #: 2 Count date: 15-Nov-07	Weather conditions: Person(s) who counted:
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**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 982 North Entering: 547 North Peds: 0 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heavys</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> </tr> <tr> <td style="padding: 2px;">Trucks</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">18</td> <td style="padding: 2px;">20</td> <td style="padding: 2px;">20</td> </tr> <tr> <td style="padding: 2px;">Cars</td> <td style="padding: 2px;">24</td> <td style="padding: 2px;">503</td> <td style="padding: 2px;">527</td> <td style="padding: 2px;">527</td> </tr> <tr> <td style="padding: 2px;">Totals</td> <td style="padding: 2px;">26</td> <td style="padding: 2px;">521</td> <td style="padding: 2px;">527</td> <td style="padding: 2px;">527</td> </tr> </table>	Heavys	0	0	0	0	Trucks	2	18	20	20	Cars	24	503	527	527	Totals	26	521	527	527	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heavys</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> </tr> <tr> <td style="padding: 2px;">Trucks</td> <td style="padding: 2px;">14</td> <td style="padding: 2px;">14</td> <td style="padding: 2px;">14</td> </tr> <tr> <td style="padding: 2px;">Cars</td> <td style="padding: 2px;">421</td> <td style="padding: 2px;">421</td> <td style="padding: 2px;">421</td> </tr> <tr> <td style="padding: 2px;">Totals</td> <td style="padding: 2px;">435</td> <td style="padding: 2px;">435</td> <td style="padding: 2px;">435</td> </tr> </table>	Heavys	0	0	0	Trucks	14	14	14	Cars	421	421	421	Totals	435	435	435	
Heavys	0	0	0	0																																			
Trucks	2	18	20	20																																			
Cars	24	503	527	527																																			
Totals	26	521	527	527																																			
Heavys	0	0	0																																				
Trucks	14	14	14																																				
Cars	421	421	421																																				
Totals	435	435	435																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heavys</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">36</td> <td style="padding: 2px;">38</td> </tr> <tr> <td style="padding: 2px;">Trucks</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">18</td> <td style="padding: 2px;">20</td> <td style="padding: 2px;">20</td> </tr> <tr> <td style="padding: 2px;">Cars</td> <td style="padding: 2px;">24</td> <td style="padding: 2px;">503</td> <td style="padding: 2px;">527</td> <td style="padding: 2px;">527</td> </tr> <tr> <td style="padding: 2px;">Totals</td> <td style="padding: 2px;">26</td> <td style="padding: 2px;">521</td> <td style="padding: 2px;">527</td> <td style="padding: 2px;">527</td> </tr> </table>					Heavys	0	2	36	38	Trucks	2	18	20	20	Cars	24	503	527	527	Totals	26	521	527	527															
Heavys	0	2	36	38																																			
Trucks	2	18	20	20																																			
Cars	24	503	527	527																																			
Totals	26	521	527	527																																			
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heavys</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">19</td> <td style="padding: 2px;">20</td> </tr> <tr> <td style="padding: 2px;">Trucks</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">18</td> <td style="padding: 2px;">19</td> <td style="padding: 2px;">19</td> </tr> <tr> <td style="padding: 2px;">Cars</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">27</td> <td style="padding: 2px;">27</td> <td style="padding: 2px;">27</td> </tr> <tr> <td style="padding: 2px;">Totals</td> <td style="padding: 2px;">1</td> <td style="padding: 2px;">46</td> <td style="padding: 2px;">46</td> <td style="padding: 2px;">46</td> </tr> </table>					Heavys	0	1	19	20	Trucks	1	18	19	19	Cars	0	27	27	27	Totals	1	46	46	46															
Heavys	0	1	19	20																																			
Trucks	1	18	19	19																																			
Cars	0	27	27	27																																			
Totals	1	46	46	46																																			
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Heavys	0	0	0	0																																			
Trucks	18	13	13	13																																			
Cars	530	402	414	414																																			
Totals	548	415	415	415																																			
Peds Cross: X West Peds: 5 West Entering: 47 West Leg Total: 85		Peds Cross: ∞ South Peds: 0 South Entering: 427 South Leg Total: 975																																					

Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 15:15:00 To: 16:15:00
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Municipality: Region of Peel Site #: 0042140900 Intersection: Dixie Rd & Lascelles Blvd TFR File #: 2 Count date: 15-Nov-07	Weather conditions: Person(s) who counted:
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** Non-Signalized Intersection **	Major Road: Dixie Rd runs N/S
--	--------------------------------------

North Leg Total: 1824 North Entering: 644 North Peds: 0 Peds Cross: ☒	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0 0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Heavys 0</td> </tr> <tr> <td style="border-right: 1px solid black;">Trucks 4 28</td> <td style="border-right: 1px solid black;">32</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Trucks 23</td> </tr> <tr> <td style="border-right: 1px solid black;">Cars 36 576</td> <td style="border-right: 1px solid black;">612</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Cars 1157</td> </tr> <tr> <td style="border-right: 1px solid black;">Totals 40 604</td> <td style="border-right: 1px solid black;"></td> <td style="border-right: 1px solid black;"></td> <td style="border-right: 1px solid black;">Totals 1180</td> </tr> </table>	Heavys 0 0	0	↑	Heavys 0	Trucks 4 28	32	↑	Trucks 23	Cars 36 576	612	↑	Cars 1157	Totals 40 604			Totals 1180																		
Heavys 0 0	0	↑	Heavys 0																																
Trucks 4 28	32	↑	Trucks 23																																
Cars 36 576	612	↑	Cars 1157																																
Totals 40 604			Totals 1180																																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">Dixie Rd</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 8</td> <td style="border-right: 1px solid black;">Cars 110</td> <td style="border-right: 1px solid black;">Totals 118</td> </tr> </table> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> Dixie Rd </td> </tr> <tr> <td style="text-align: center;"> Lascelles Blvd </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> Dixie Rd </td> <td style="text-align: center;"> Dixie Rd </td> </tr> <tr> <td style="text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 1</td> <td style="border-right: 1px solid black;">Cars 18</td> <td style="border-right: 1px solid black;">Totals 19</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">2</td> <td style="border-right: 1px solid black;">40</td> <td style="border-right: 1px solid black;">42</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">3</td> <td style="border-right: 1px solid black;">58</td> <td style="border-right: 1px solid black;"></td> </tr> </table> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> Dixie Rd </td> <td style="text-align: center;"> Dixie Rd </td> </tr> </table>					Dixie Rd			<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 8</td> <td style="border-right: 1px solid black;">Cars 110</td> <td style="border-right: 1px solid black;">Totals 118</td> </tr> </table>	Heavys 0	Trucks 8	Cars 110	Totals 118	 	 	Dixie Rd 	Lascelles Blvd 		Dixie Rd 	Dixie Rd 	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 1</td> <td style="border-right: 1px solid black;">Cars 18</td> <td style="border-right: 1px solid black;">Totals 19</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">2</td> <td style="border-right: 1px solid black;">40</td> <td style="border-right: 1px solid black;">42</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">3</td> <td style="border-right: 1px solid black;">58</td> <td style="border-right: 1px solid black;"></td> </tr> </table>	Heavys 0	Trucks 1	Cars 18	Totals 19	0	2	40	42	0	3	58		 	Dixie Rd 	Dixie Rd
	Dixie Rd																																		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 8</td> <td style="border-right: 1px solid black;">Cars 110</td> <td style="border-right: 1px solid black;">Totals 118</td> </tr> </table>	Heavys 0	Trucks 8	Cars 110	Totals 118	 	 	Dixie Rd 																												
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Lascelles Blvd 		Dixie Rd 	Dixie Rd 																																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Trucks 1</td> <td style="border-right: 1px solid black;">Cars 18</td> <td style="border-right: 1px solid black;">Totals 19</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">2</td> <td style="border-right: 1px solid black;">40</td> <td style="border-right: 1px solid black;">42</td> </tr> <tr> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">3</td> <td style="border-right: 1px solid black;">58</td> <td style="border-right: 1px solid black;"></td> </tr> </table>	Heavys 0	Trucks 1	Cars 18	Totals 19	0	2	40	42	0	3	58		 	Dixie Rd 	Dixie Rd 																				
Heavys 0	Trucks 1	Cars 18	Totals 19																																
0	2	40	42																																
0	3	58																																	
Peds Cross: ☒ West Peds: 0 West Entering: 61 West Leg Total: 179	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Cars 616</td> <td style="border-right: 1px solid black;">Trucks 30</td> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Totals 646</td> </tr> </table>	Cars 616	Trucks 30	Heavys 0	Totals 646	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Cars 74</td> <td style="border-right: 1px solid black;">Trucks 4</td> <td style="border-right: 1px solid black;">Heavys 0</td> <td style="border-right: 1px solid black;">Totals 78</td> </tr> <tr> <td style="border-right: 1px solid black;">1139</td> <td style="border-right: 1px solid black;">22</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">1161</td> </tr> </table>	Cars 74	Trucks 4	Heavys 0	Totals 78	1139	22	0	1161	Peds Cross: ☒ South Peds: 0 South Entering: 1239 South Leg Total: 1885																				
Cars 616	Trucks 30	Heavys 0	Totals 646																																
Cars 74	Trucks 4	Heavys 0	Totals 78																																
1139	22	0	1161																																

Comments

Ontario Traffic Inc

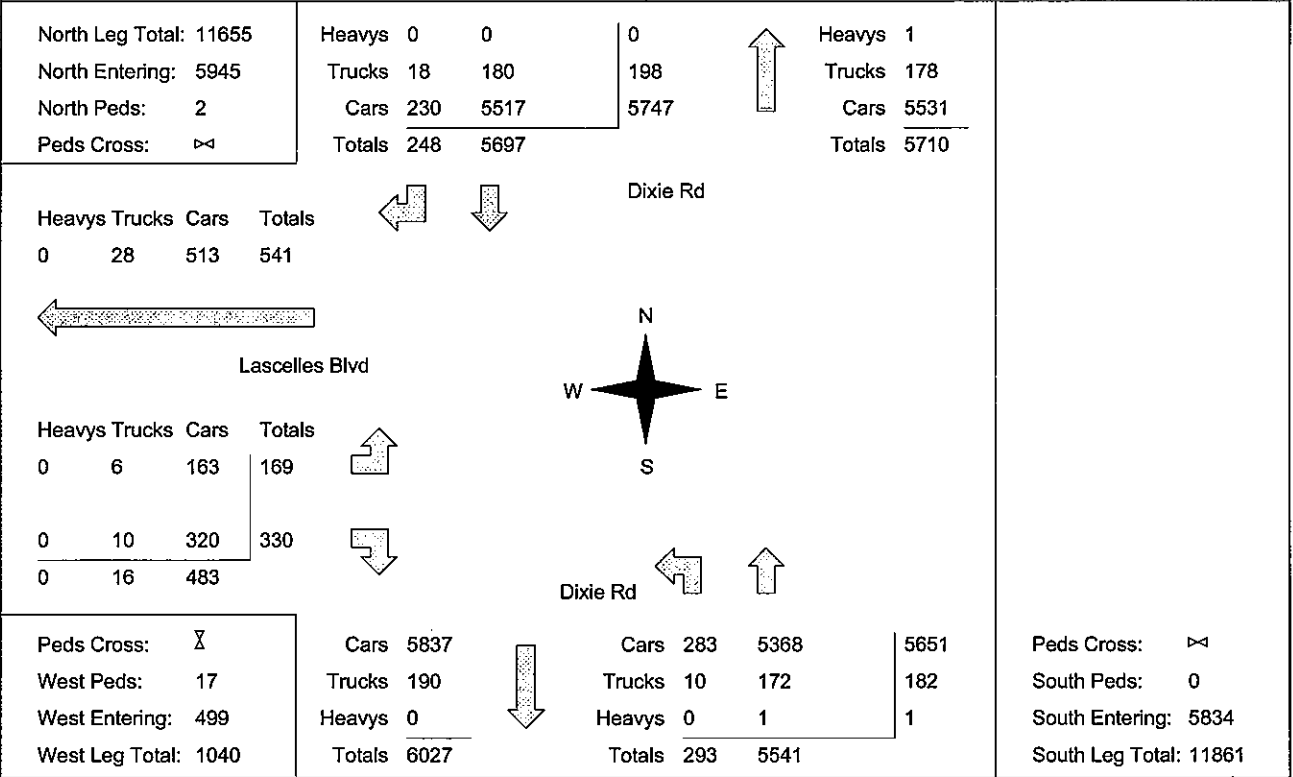
Total Count Diagram

Municipality: Region of Peel
Site #: 0042140900
Intersection: Dixie Rd & Lascelles Blvd
TFR File #: 2
Count date: 15-Nov-07

Weather conditions:
Person(s) who counted:

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

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Lascelles Blvd Count Date: 15-Nov-07 Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	1294	13	1307	0	1707	8:00:00	9	391	0	400	0
9:00:00	0	1353	46	1399	0	1823	9:00:00	15	409	0	424	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	0	476	25	501	0	888	12:00:00	10	377	0	387	0
13:00:00	0	468	29	497	1	952	13:00:00	21	434	0	455	0
14:00:00	0	401	34	435	1	905	14:00:00	25	445	0	470	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	573	43	616	0	1811	16:00:00	70	1125	0	1195	0
17:00:00	0	560	23	583	0	1805	17:00:00	69	1153	0	1222	0
18:00:00	0	572	35	607	0	1888	18:00:00	74	1207	0	1281	0
Totals:	0	5697	248	5945	2	11779		293	5541	0	5834	0

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	145	8:00:00	35	0	110	145	1
9:00:00	0	0	0	0	0	89	9:00:00	44	0	45	89	4
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	0	0	0	0	0	45	12:00:00	17	0	28	45	1
13:00:00	0	0	0	0	0	43	13:00:00	16	0	27	43	10
14:00:00	0	0	0	0	2	35	14:00:00	11	0	24	35	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	51	16:00:00	14	0	37	51	0
17:00:00	0	0	0	0	0	49	17:00:00	17	0	32	49	0
18:00:00	0	0	0	0	0	42	18:00:00	15	0	27	42	0
Totals:	0	0	0	0	2	499		169	0	330	499	17

Calculated Values for Traffic Crossing Major Street

Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00
Crossing Values:	35	44	17	17		12	14	17	15

Ontario Traffic Inc

Count Date: 15-Nov-07

Intersection: Dixie Rd & Lascelles Blvd

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #1: Minimum Vehicular Volumes.

A. All Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1852	1912	933	995	940	1862	1854	1930	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0

Total:	800
Actual Average (Total/8):	100%

B. Minor Street Both Approaches.

100%	180	255	180	383	255									100%
80%	143	203	143	305	203	145	89	45	43	35	51	49	42	Yes: X No:
Minor Street Both Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					38	23	12	11	9	13	13	11	130

Total:	130
Actual Average (Total/8):	16%

Ontario Traffic Inc

Count Date: 15-Nov-07

Intersection: Dixie Rd & Lascelles Blvd

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #2: Delay to Cross Traffic.

A. Major Street Both Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes											
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	1707	1823	888	952	905	1811	1805	1888	Yes: No: X
All Approaches	100% Fulfilled					100	100		100	100	100	100	100	700
	80% Fulfilled							80						80
	Actual % if Below 80%													0

Total:	780
Actual Average (Total/8):	98%

B. Traffic Crossing Major Street.

100%	50	75	50	113	75									100%
80%	40	60	40	90	60	35	44	17	17	12	14	17	15	Yes: No: X
All Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					31	39	15	15	11	12	15	13	151

Total:	151
Actual Average (Total/8):	19%

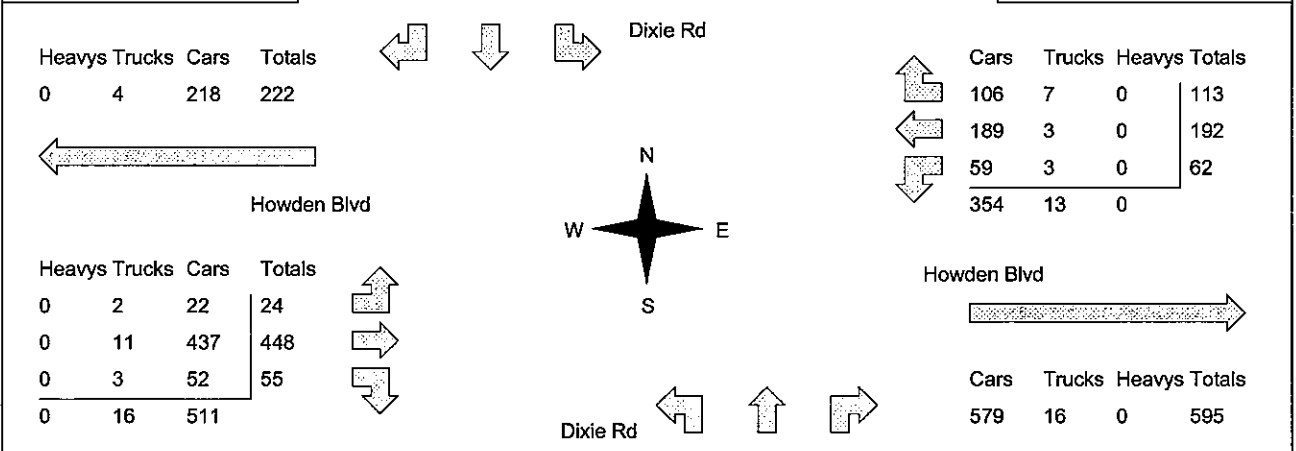
Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:45:00 To: 8:45:00
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Municipality: Region of Peel Site #: 0042080500 Intersection: Dixie Rd & Howden Blvd TFR File #: 1 Count date: 14-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Dixie Rd runs N/S
--------------------------------------	--------------------------------------

North Leg Total: 1733 North Entering: 1277 North Peds: 0 Peds Cross: ∞	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>1</td><td>29</td><td>3</td><td>33</td></tr> <tr><td>Cars</td><td>15</td><td>1152</td><td>77</td><td>1244</td></tr> <tr><td>Totals</td><td>16</td><td>1181</td><td>80</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	1	29	3	33	Cars	15	1152	77	1244	Totals	16	1181	80			<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>32</td></tr> <tr><td>Cars</td><td>424</td></tr> <tr><td>Totals</td><td>456</td></tr> </table>	Heavys	0	Trucks	32	Cars	424	Totals	456	East Leg Total: 962 East Entering: 367 East Peds: 3 Peds Cross: ∞
Heavys	0	0	0	0																												
Trucks	1	29	3	33																												
Cars	15	1152	77	1244																												
Totals	16	1181	80																													
Heavys	0																															
Trucks	32																															
Cars	424																															
Totals	456																															



Peds Cross: ∞ West Peds: 1 West Entering: 527 West Leg Total: 749	<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>1263</td></tr> <tr><td>Trucks</td><td>35</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1298</td></tr> </table>	Cars	1263	Trucks	35	Heavys	0	Totals	1298		<table style="border-collapse: collapse;"> <tr><td>Cars</td><td>14</td><td>296</td><td>65</td><td>375</td></tr> <tr><td>Trucks</td><td>0</td><td>23</td><td>2</td><td>25</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>14</td><td>319</td><td>67</td><td></td></tr> </table>	Cars	14	296	65	375	Trucks	0	23	2	25	Heavys	0	0	0	0	Totals	14	319	67		Peds Cross: ∞ South Peds: 0 South Entering: 400 South Leg Total: 1698
Cars	1263																															
Trucks	35																															
Heavys	0																															
Totals	1298																															
Cars	14	296	65	375																												
Trucks	0	23	2	25																												
Heavys	0	0	0	0																												
Totals	14	319	67																													

Comments

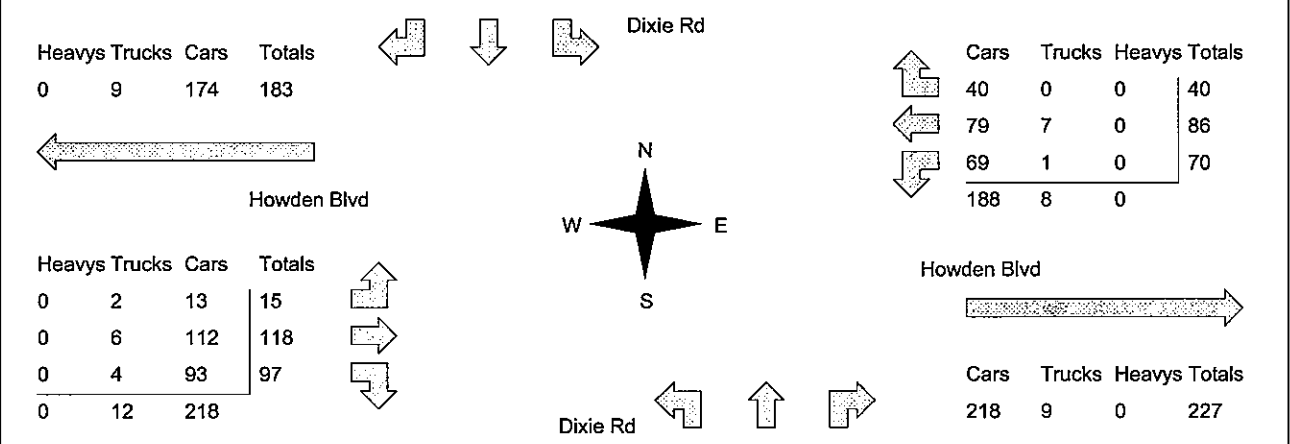
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 12:15:00 To: 13:15:00
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Municipality: Region of Peel Site #: 0042080500 Intersection: Dixie Rd & Howden Blvd TFR File #: 1 Count date: 14-Nov-07	Weather conditions: Person(s) who counted:
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**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 934 North Entering: 493 North Peds: 5 Peds Cross: 2	<table style="border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>22</td><td>2</td><td>24</td></tr> <tr><td>Cars</td><td>18</td><td>410</td><td>41</td><td>469</td></tr> <tr><td>Totals</td><td>18</td><td>432</td><td>43</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	0	22	2	24	Cars	18	410	41	469	Totals	18	432	43		↑	Heavys 0 Trucks 24 Cars 417 Totals 441	East Leg Total: 423 East Entering: 196 East Peds: 4 Peds Cross: 2
Heavys	0	0	0	0																				
Trucks	0	22	2	24																				
Cars	18	410	41	469																				
Totals	18	432	43																					



Peds Cross: 2 West Peds: 8 West Entering: 230 West Leg Total: 413	Cars 572 Trucks 27 Heavys 0 Totals 599	↓	Cars 77 364 65 506 Trucks 2 22 1 25 Heavys 0 0 0 0 Totals 79 386 66	Peds Cross: 2 South Peds: 1 South Entering: 531 South Leg Total: 1130
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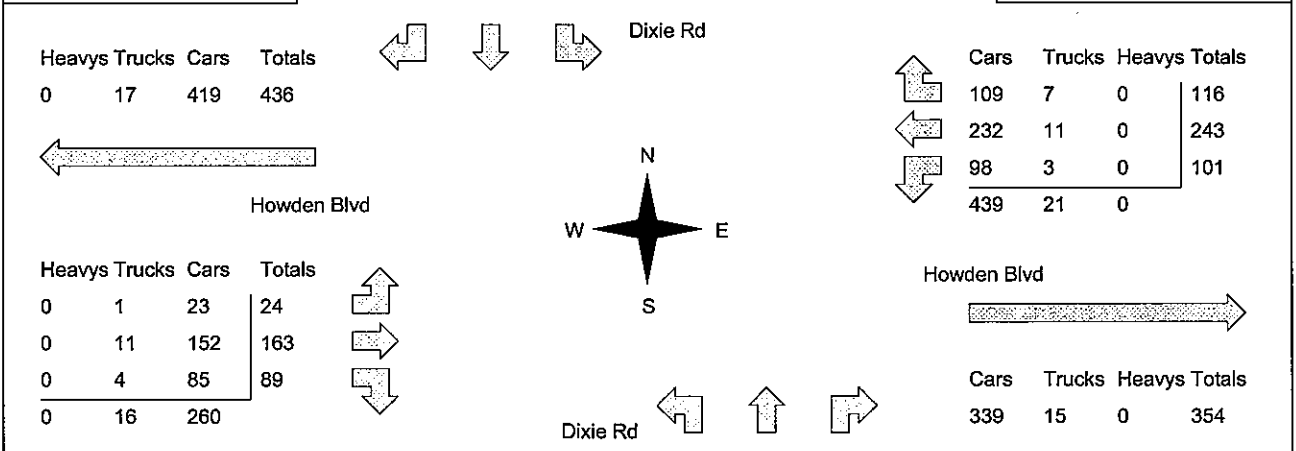
Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 15:30:00 To: 16:30:00
Municipality: Region of Peel Site #: 0042080500 Intersection: Dixie Rd & Howden Blvd TFR File #: 1 Count date: 14-Nov-07	Weather conditions: Person(s) who counted:	

**** Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1751 North Entering: 601 North Peds: 13 Peds Cross: \times	<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>2</td><td>18</td><td>3</td><td>23</td></tr> <tr><td>Cars</td><td>24</td><td>491</td><td>63</td><td>578</td></tr> <tr><td>Totals</td><td>26</td><td>509</td><td>66</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	2	18	3	23	Cars	24	491	63	578	Totals	26	509	66		<table style="margin: auto;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>32</td></tr> <tr><td>Cars</td><td>1118</td></tr> <tr><td>Totals</td><td>1150</td></tr> </table>	Heavys	0	Trucks	32	Cars	1118	Totals	1150	East Leg Total: 814 East Entering: 460 East Peds: 5 Peds Cross: \times
Heavys	0	0	0	0																											
Trucks	2	18	3	23																											
Cars	24	491	63	578																											
Totals	26	509	66																												
Heavys	0																														
Trucks	32																														
Cars	1118																														
Totals	1150																														



Peds Cross: \times West Peds: 5 West Entering: 276 West Leg Total: 712	<table style="margin: auto;"> <tr><td>Cars</td><td>674</td></tr> <tr><td>Trucks</td><td>25</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>699</td></tr> </table>	Cars	674	Trucks	25	Heavys	0	Totals	699	<table style="margin: auto;"> <tr><td>Cars</td><td>163</td><td>986</td><td>124</td><td>1273</td></tr> <tr><td>Trucks</td><td>4</td><td>24</td><td>1</td><td>29</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>167</td><td>1010</td><td>125</td><td></td></tr> </table>	Cars	163	986	124	1273	Trucks	4	24	1	29	Heavys	0	0	0	0	Totals	167	1010	125		Peds Cross: \times South Peds: 17 South Entering: 1302 South Leg Total: 2001
Cars	674																														
Trucks	25																														
Heavys	0																														
Totals	699																														
Cars	163	986	124	1273																											
Trucks	4	24	1	29																											
Heavys	0	0	0	0																											
Totals	167	1010	125																												

Comments

Ontario Traffic Inc

Total Count Diagram

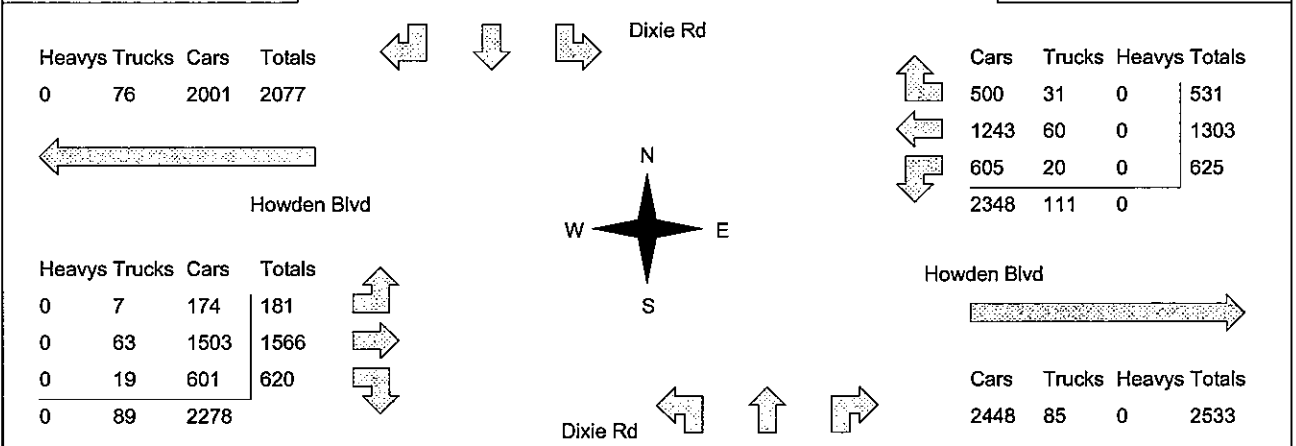
Municipality: Region of Peel
Site #: 0042080500
Intersection: Dixie Rd & Howden Blvd
TFR File #: 1
Count date: 14-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Dixie Rd runs N/S

North Leg Total: 10983 North Entering: 5547 North Peds: 33 Peds Cross: ⇌	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>5</td><td>196</td><td>12</td><td>213</td></tr> <tr><td>Cars</td><td>130</td><td>4829</td><td>375</td><td>5334</td></tr> <tr><td>Totals</td><td>135</td><td>5025</td><td>387</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	5	196	12	213	Cars	130	4829	375	5334	Totals	135	5025	387		↑	Heavys 0 Trucks 224 Cars 5212 Totals 5436	East Leg Total: 4992 East Entering: 2459 East Peds: 24 Peds Cross: ⚡
Heavys	0	0	0	0																				
Trucks	5	196	12	213																				
Cars	130	4829	375	5334																				
Totals	135	5025	387																					



Peds Cross: ⚡ West Peds: 21 West Entering: 2367 West Leg Total: 4444	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>6035</td></tr> <tr><td>Trucks</td><td>235</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>6270</td></tr> </table>	Cars	6035	Trucks	235	Heavys	0	Totals	6270	↓	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>628</td><td>4538</td><td>570</td><td>5736</td></tr> <tr><td>Trucks</td><td>11</td><td>186</td><td>10</td><td>207</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>639</td><td>4724</td><td>580</td><td></td></tr> </table>	Cars	628	4538	570	5736	Trucks	11	186	10	207	Heavys	0	0	0	0	Totals	639	4724	580		Peds Cross: ⇌ South Peds: 36 South Entering: 5943 South Leg Total: 12213
Cars	6035																															
Trucks	235																															
Heavys	0																															
Totals	6270																															
Cars	628	4538	570	5736																												
Trucks	11	186	10	207																												
Heavys	0	0	0	0																												
Totals	639	4724	580																													

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Howden Blvd

Count Date: 14-Nov-07

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	38	1220	5	1263	0	1781	8:00:00	24	434	60	518	0
9:00:00	80	1088	19	1187	0	1541	9:00:00	22	271	61	354	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	43	418	9	470	1	936	12:00:00	56	350	60	466	1
13:00:00	33	401	13	447	4	973	13:00:00	64	386	76	526	1
14:00:00	35	366	16	417	6	932	14:00:00	79	381	55	515	4
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	50	497	22	569	18	1706	16:00:00	151	868	118	1137	24
17:00:00	55	513	18	586	4	1815	17:00:00	123	1020	86	1229	6
18:00:00	53	522	33	608	0	1806	18:00:00	120	1014	64	1198	0
Totals:	387	5025	135	5547	33	11490		639	4724	580	5943	36

East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	84	99	46	229	3	646	8:00:00	34	303	80	417	1
9:00:00	65	229	113	407	1	935	9:00:00	19	449	60	528	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	70	91	35	196	1	408	12:00:00	13	134	65	212	1
13:00:00	63	81	42	186	2	399	13:00:00	12	114	87	213	8
14:00:00	68	91	34	193	8	398	14:00:00	16	102	87	205	2
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	78	184	84	346	5	598	16:00:00	22	160	70	252	1
17:00:00	100	283	93	476	4	762	17:00:00	35	164	87	286	8
18:00:00	97	245	84	426	0	680	18:00:00	30	140	84	254	0
Totals:	625	1303	531	2459	24	4826		181	1566	620	2367	21

Calculated Values for Traffic Crossing Major Street										
Hours Ending:	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00		
Crossing Values:	421	533	219	194	196	326	428	372		

Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:30:00 To: 8:30:00
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Municipality: Region of Peel Site #: 0042063200 Intersection: Dixie Rd & Hazelwood Dr TFR File #: 2 Count date: 27-Nov-07	Weather conditions: Person(s) who counted:
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**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 2351 North Entering: 1938 North Peds: 0 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>41</td><td>41</td></tr> <tr><td>Cars</td><td>6</td><td>1891</td><td>1897</td></tr> <tr><td>Totals</td><td>6</td><td>1932</td><td></td></tr> </table>	Heavys	0	0	0	Trucks	0	41	41	Cars	6	1891	1897	Totals	6	1932		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>26</td></tr> <tr><td>Cars</td><td>387</td></tr> <tr><td>Totals</td><td>413</td></tr> </table>	Heavys	0	Trucks	26	Cars	387	Totals	413													
Heavys	0	0	0																																				
Trucks	0	41	41																																				
Cars	6	1891	1897																																				
Totals	6	1932																																					
Heavys	0																																						
Trucks	26																																						
Cars	387																																						
Totals	413																																						
<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>12</td><td>12</td></tr> </table>	Heavys	0	0	12	12	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>2</td><td>7</td><td>9</td></tr> <tr><td>Trucks</td><td>0</td><td>1</td><td>19</td><td>20</td></tr> <tr><td>Cars</td><td>0</td><td>3</td><td>26</td><td></td></tr> </table>	Heavys	0	2	7	9	Trucks	0	1	19	20	Cars	0	3	26		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>6</td><td>380</td><td>386</td></tr> <tr><td>Trucks</td><td>0</td><td>24</td><td>24</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>6</td><td>404</td><td></td></tr> </table>	Cars	6	380	386	Trucks	0	24	24	Heavys	0	0	0	Totals	6	404		Peds Cross: ∞ South Peds: 0 South Entering: 410 South Leg Total: 2362
Heavys	0	0	12	12																																			
Heavys	0	2	7	9																																			
Trucks	0	1	19	20																																			
Cars	0	3	26																																				
Cars	6	380	386																																				
Trucks	0	24	24																																				
Heavys	0	0	0																																				
Totals	6	404																																					
Peds Cross: ∞ West Peds: 2 West Entering: 29 West Leg Total: 41	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>1910</td></tr> <tr><td>Trucks</td><td>42</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1952</td></tr> </table>	Cars	1910	Trucks	42	Heavys	0	Totals	1952																														
Cars	1910																																						
Trucks	42																																						
Heavys	0																																						
Totals	1952																																						

Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
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Municipality: Region of Peel Site #: 0042063200 Intersection: Dixie Rd & Hazelwood Dr TFR File #: 2 Count date: 27-Nov-07	Weather conditions: Person(s) who counted:
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**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1457 North Entering: 762 North Peds: 1 Peds Cross: ∞	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>40</td><td>40</td></tr> <tr><td>Cars</td><td>2</td><td>720</td><td>722</td></tr> <tr><td>Totals</td><td>2</td><td>760</td><td></td></tr> </table>	Heavys	0	0	0	Trucks	0	40	40	Cars	2	720	722	Totals	2	760			<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>28</td></tr> <tr><td>Cars</td><td>667</td></tr> <tr><td>Totals</td><td>695</td></tr> </table>	Heavys	0	Trucks	28	Cars	667	Totals	695	
Heavys	0	0	0																									
Trucks	0	40	40																									
Cars	2	720	722																									
Totals	2	760																										
Heavys	0																											
Trucks	28																											
Cars	667																											
Totals	695																											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%; text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>9</td></tr> <tr><td>Totals</td><td>9</td></tr> </table> </td> <td style="width: 20%; text-align: center;"> </td> <td style="width: 40%; text-align: center;"> Dixie Rd </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> Hazelwood Dr </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> Dixie Rd </td> </tr> </table>					<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>9</td></tr> <tr><td>Totals</td><td>9</td></tr> </table>	Heavys	0	Trucks	0	Cars	9	Totals	9		Dixie Rd 		Hazelwood Dr		Dixie Rd 									
	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td></tr> <tr><td>Cars</td><td>9</td></tr> <tr><td>Totals</td><td>9</td></tr> </table>	Heavys	0	Trucks	0	Cars	9	Totals	9		Dixie Rd 																	
Heavys	0																											
Trucks	0																											
Cars	9																											
Totals	9																											
	Hazelwood Dr		Dixie Rd 																									
Peds Cross: ∞ West Peds: 0 West Entering: 7 West Leg Total: 16	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>727</td></tr> <tr><td>Trucks</td><td>40</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>767</td></tr> </table>	Cars	727	Trucks	40	Heavys	0	Totals	767		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>7</td><td>667</td><td>674</td></tr> <tr><td>Trucks</td><td>0</td><td>28</td><td>28</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>7</td><td>695</td><td></td></tr> </table>	Cars	7	667	674	Trucks	0	28	28	Heavys	0	0	0	Totals	7	695		Peds Cross: ∞ South Peds: 0 South Entering: 702 South Leg Total: 1469
Cars	727																											
Trucks	40																											
Heavys	0																											
Totals	767																											
Cars	7	667	674																									
Trucks	0	28	28																									
Heavys	0	0	0																									
Totals	7	695																										

Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:00:00 To: 17:00:00
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Municipality: Region of Peel Site #: 0042063200 Intersection: Dixie Rd & Hazelwood Dr TFR File #: 2 Count date: 27-Nov-07	Weather conditions: Person(s) who counted:
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**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 2450 North Entering: 780 North Peds: 0 Peds Cross: ><	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>27</td><td>27</td></tr> <tr><td>Cars</td><td>8</td><td>745</td><td>753</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>8</td><td>772</td><td></td></tr> </table>	Heavys	0	0	0	Trucks	0	27	27	Cars	8	745	753	Totals	8	772		↑	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>22</td></tr> <tr><td>Cars</td><td>1648</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>1670</td></tr> </table>	Heavys	0	Trucks	22	Cars	1648	Totals	1670	
Heavys	0	0	0																									
Trucks	0	27	27																									
Cars	8	745	753																									
Totals	8	772																										
Heavys	0																											
Trucks	22																											
Cars	1648																											
Totals	1670																											
<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>24</td><td>24</td></tr> </table>	Heavys	0	0	24	24	← ↓	Dixie Rd																					
Heavys	0	0	24	24																								
<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>3</td><td>3</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td>6</td><td>6</td></tr> <tr style="border-top: 1px solid black;"><td>Cars</td><td>0</td><td>0</td><td>9</td><td></td></tr> </table>	Heavys	0	0	3	3	Trucks	0	0	6	6	Cars	0	0	9		↑ ↓	Hazelwood Dr											
Heavys	0	0	3	3																								
Trucks	0	0	6	6																								
Cars	0	0	9																									
<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Trucks</td><td>27</td></tr> <tr><td>Cars</td><td>751</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>778</td></tr> </table>	Heavys	0	Trucks	27	Cars	751	Totals	778	↓	Dixie Rd	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>22</td><td>22</td></tr> <tr><td>Cars</td><td>16</td><td>1645</td><td>1661</td></tr> <tr style="border-top: 1px solid black;"><td>Totals</td><td>16</td><td>1667</td><td></td></tr> </table>	Heavys	0	0	0	Trucks	0	22	22	Cars	16	1645	1661	Totals	16	1667		Peds Cross: ∞ South Peds: 0 South Entering: 1683 South Leg Total: 2461
Heavys	0																											
Trucks	27																											
Cars	751																											
Totals	778																											
Heavys	0	0	0																									
Trucks	0	22	22																									
Cars	16	1645	1661																									
Totals	16	1667																										

Comments

Ontario Traffic Inc

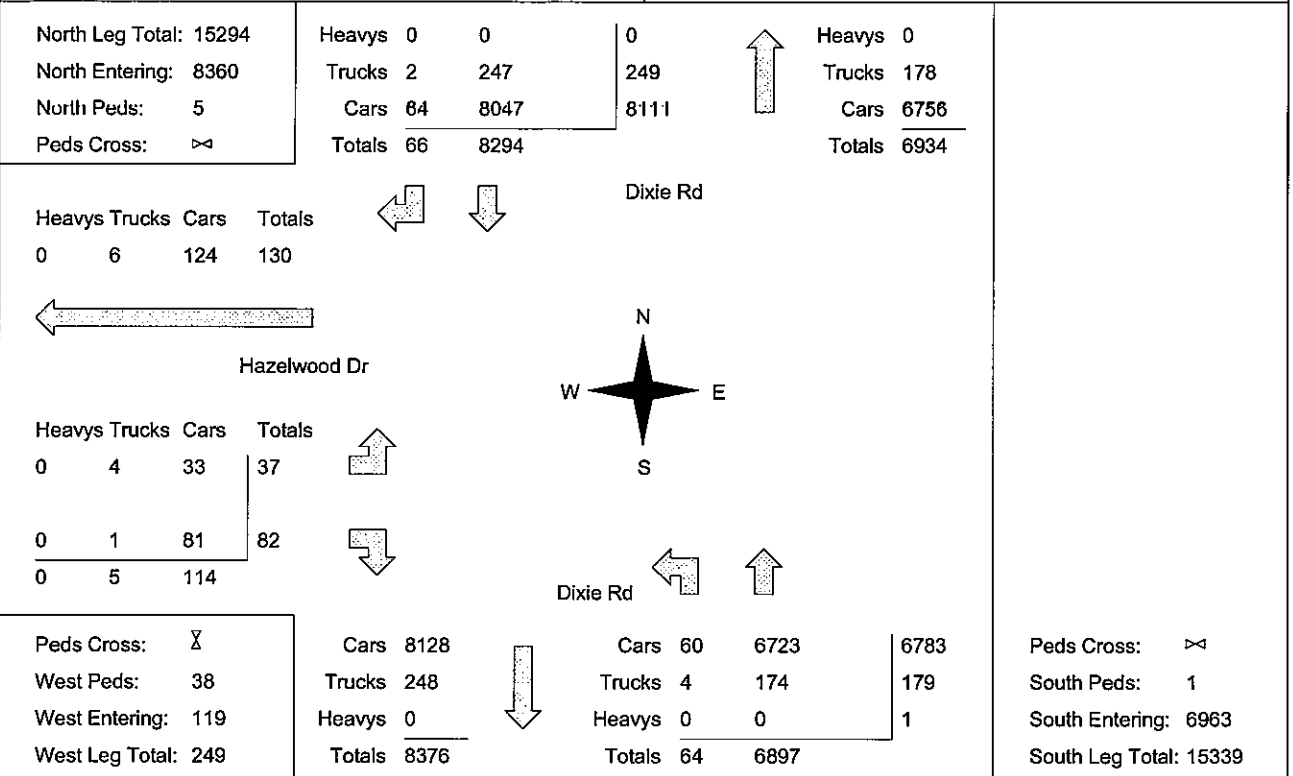
Total Count Diagram

Municipality: Region of Peel
Site #: 0042063200
Intersection: Dixie Rd & Hazelwood Dr
TFR File #: 2
Count date: 27-Nov-07

Weather conditions:
Person(s) who counted:

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

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Hazelwood Dr

Count Date: 27-Nov-07

Municipality: Region of Peel

North Approach Totals						North/South Total Approaches	South Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	1908	5	1913	1	2298	8:00:00	3	382	0	385	0
9:00:00	0	1748	3	1751	0	2141	9:00:00	5	385	0	390	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	0	733	6	739	2	1364	12:00:00	8	617	0	625	0
13:00:00	0	697	8	705	0	1319	13:00:00	4	608	2	614	0
14:00:00	0	760	2	762	1	1464	14:00:00	7	695	0	702	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	868	14	882	0	2181	16:00:00	13	1286	0	1299	0
17:00:00	0	772	8	780	0	2463	17:00:00	16	1667	0	1683	0
18:00:00	0	808	20	828	1	2093	18:00:00	8	1257	0	1265	1
Totals:	0	8294	66	8360	5	15323		64	6897	2	6963	1
East Approach Totals						East/West Total Approaches	West Approach Totals					
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds		Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	21	8:00:00	7	0	14	21	0
9:00:00	0	0	0	0	0	33	9:00:00	9	0	24	33	3
11:00:00	0	0	0	0	1	0	11:00:00	0	0	0	0	0
12:00:00	0	0	0	0	0	12	12:00:00	2	0	10	12	5
13:00:00	0	0	0	0	0	5	13:00:00	3	0	2	5	4
14:00:00	0	0	0	0	0	7	14:00:00	0	0	7	7	0
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	14	16:00:00	6	0	8	14	12
17:00:00	0	0	0	0	0	9	17:00:00	3	0	6	9	5
18:00:00	0	0	0	0	3	18	18:00:00	7	0	11	18	9
Totals:	0	0	0	0	4	119		37	0	82	119	38
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	8	9	4	3		1	6	3	9			

Ontario Traffic Inc

Count Date: 27-Nov-07

Intersection: Dixie Rd & Hazelwood Dr

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #1: Minimum Vehicular Volumes.

A. All Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	2319	2174	1376	1324	1471	2195	2472	2111	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0
											Total:	800		
											Actual Average (Total/8):	100%		

B. Minor Street Both Approaches.

100%	180	255	180	383	255									100%
80%	143	203	143	305	203	21	33	12	5	7	14	9	18	Yes: X No:
Minor Street Both Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					5	9	3	1	2	4	2	5	31
											Total:	31		
											Actual Average (Total/8):	4%		

Ontario Traffic Inc

Count Date: 27-Nov-07

Intersection: Dixie Rd & Hazelwood Dr

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S two lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #2: Delay to Cross Traffic.

A. Major Street Both Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	2298	2141	1364	1319	1464	2181	2463	2093	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0
												Total:	800	
												Actual Average (Total/8):	100%	

B. Traffic Crossing Major Street.

100%	50	75	50	113	75									100%
80%	40	60	40	90	60	8	9	4	3	1	6	3	9	Yes: X No:
All Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					7	8	4	3	1	5	3	8	38
												Total:	38	
												Actual Average (Total/8):	5%	

Ontario 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

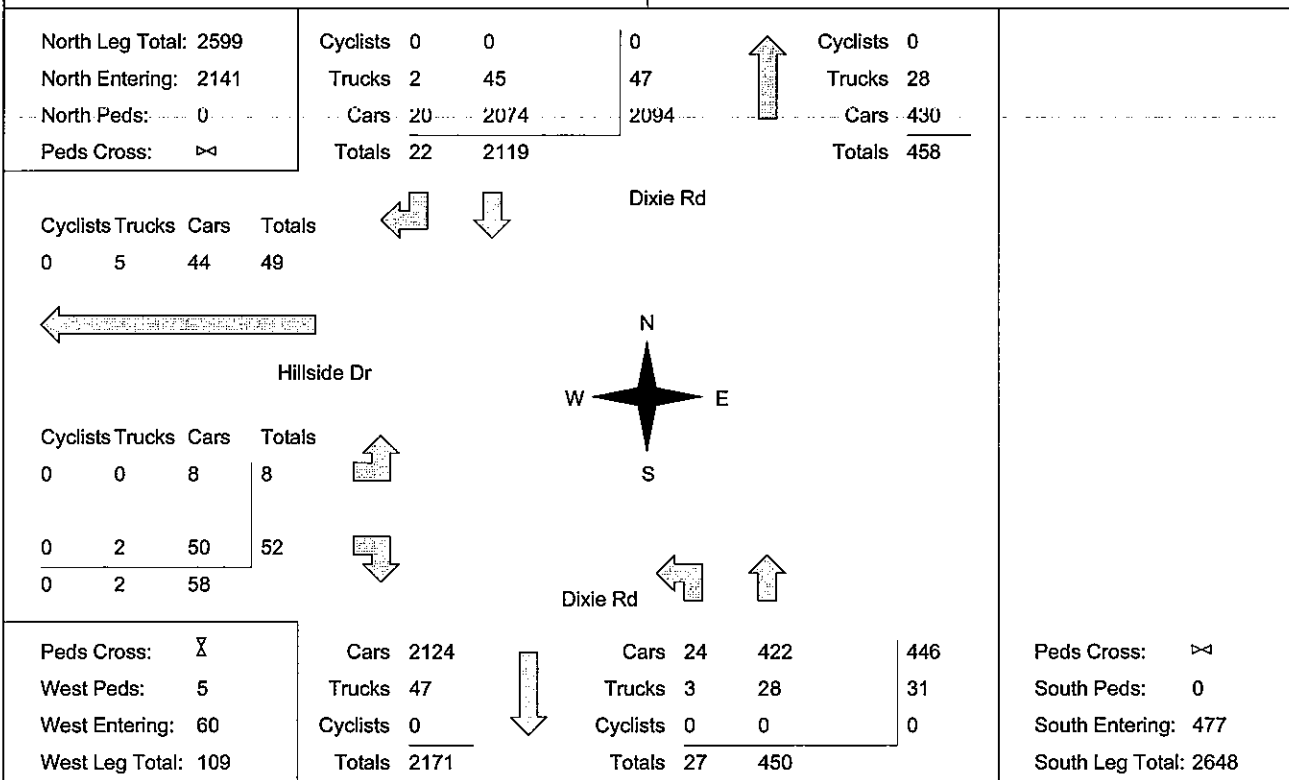
Municipality: Region of Peel
Site #: 0042029800
Intersection: Dixie Rd & Hillside Dr
TFR File #: 5
Count date: 25-Oct-07

Weather conditions:

Person(s) who counted:

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

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
-----------------------------	---	--

Municipality: Region of Peel Site #: 0042029800 Intersection: Dixie Rd & Hillside Dr TFR File #: 5 Count date: 25-Oct-07	Weather conditions: Person(s) who counted:
---	---

**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 1428 North Entering: 729 North Peds: 1 Peds Cross: ><	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>0</td><td>27</td><td>27</td></tr> <tr><td>Cars</td><td>6</td><td>696</td><td>702</td></tr> <tr><td>Totals</td><td>6</td><td>723</td><td></td></tr> </table>	Cyclists	0	0	0	Trucks	0	27	27	Cars	6	696	702	Totals	6	723		<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td></tr> <tr><td>Trucks</td><td>26</td></tr> <tr><td>Cars</td><td>673</td></tr> <tr><td>Totals</td><td>699</td></tr> </table>	Cyclists	0	Trucks	26	Cars	673	Totals	699																													
Cyclists	0	0	0																																																				
Trucks	0	27	27																																																				
Cars	6	696	702																																																				
Totals	6	723																																																					
Cyclists	0																																																						
Trucks	26																																																						
Cars	673																																																						
Totals	699																																																						
<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>50</td><td>50</td></tr> <tr><td>Trucks</td><td>0</td><td>0</td><td></td><td></td></tr> <tr><td>Cars</td><td></td><td></td><td></td><td></td></tr> <tr><td>Totals</td><td></td><td></td><td></td><td></td></tr> </table>	Cyclists	0	0	50	50	Trucks	0	0			Cars					Totals					<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cyclists</td><td>0</td><td>0</td><td>3</td><td>3</td></tr> <tr><td>Trucks</td><td>0</td><td>1</td><td>29</td><td>30</td></tr> <tr><td>Cars</td><td>0</td><td>1</td><td>32</td><td></td></tr> <tr><td>Totals</td><td></td><td></td><td></td><td></td></tr> </table>	Cyclists	0	0	3	3	Trucks	0	1	29	30	Cars	0	1	32		Totals					<table style="width: 100%; border-collapse: collapse;"> <tr><td>Cars</td><td>725</td><td>714</td></tr> <tr><td>Trucks</td><td>28</td><td>26</td></tr> <tr><td>Cyclists</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>753</td><td>696</td></tr> </table>	Cars	725	714	Trucks	28	26	Cyclists	0	0	Totals	753	696	Peds Cross: >< South Peds: 1 South Entering: 740 South Leg Total: 1493
Cyclists	0	0	50	50																																																			
Trucks	0	0																																																					
Cars																																																							
Totals																																																							
Cyclists	0	0	3	3																																																			
Trucks	0	1	29	30																																																			
Cars	0	1	32																																																				
Totals																																																							
Cars	725	714																																																					
Trucks	28	26																																																					
Cyclists	0	0																																																					
Totals	753	696																																																					

Comments

Ontario Traffic Inc

Afternoon Peak Diagram	Specified Period From: 15:00:00 To: 18:00:00	One Hour Peak From: 16:45:00 To: 17:45:00
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Municipality: Region of Peel Site #: 0042029800 Intersection: Dixie Rd & Hillside Dr TFR File #: 5 Count date: 25-Oct-07	Weather conditions: Person(s) who counted:
---	---

**** Non-Signalized Intersection **** **Major Road:** Dixie Rd runs N/S

North Leg Total: 2948 North Entering: 808 North Peds: 0 Peds Cross: ><	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Cyclists 0 0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Cyclists 0</td> </tr> <tr> <td style="border-right: 1px solid black;">Trucks 1 23</td> <td style="border-right: 1px solid black;">24</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Trucks 21</td> </tr> <tr> <td style="border-right: 1px solid black;">Cars 36 748</td> <td style="border-right: 1px solid black;">784</td> <td style="border-right: 1px solid black;">↑</td> <td style="border-right: 1px solid black;">Cars 2119</td> </tr> <tr> <td style="border-right: 1px solid black;">Totals 37 771</td> <td style="border-right: 1px solid black;"></td> <td style="border-right: 1px solid black;"></td> <td style="border-right: 1px solid black;">Totals 2140</td> </tr> </table>	Cyclists 0 0	0	↑	Cyclists 0	Trucks 1 23	24	↑	Trucks 21	Cars 36 748	784	↑	Cars 2119	Totals 37 771			Totals 2140	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Cyclists 0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Cyclists 0</td> </tr> <tr> <td style="border-right: 1px solid black;">Trucks 2</td> <td style="border-right: 1px solid black;">129</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Trucks 21</td> </tr> <tr> <td style="border-right: 1px solid black;">Cars 17</td> <td style="border-right: 1px solid black;">48</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Cars 2195</td> </tr> <tr> <td style="border-right: 1px solid black;">Totals 17</td> <td style="border-right: 1px solid black;">64</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Totals 22</td> </tr> </table>	Cyclists 0	0	↓	Cyclists 0	Trucks 2	129	↓	Trucks 21	Cars 17	48	↓	Cars 2195	Totals 17	64	↓	Totals 22
Cyclists 0 0	0	↑	Cyclists 0																															
Trucks 1 23	24	↑	Trucks 21																															
Cars 36 748	784	↑	Cars 2119																															
Totals 37 771			Totals 2140																															
Cyclists 0	0	↓	Cyclists 0																															
Trucks 2	129	↓	Trucks 21																															
Cars 17	48	↓	Cars 2195																															
Totals 17	64	↓	Totals 22																															
Peds Cross: ∅ West Peds: 2 West Entering: 65 West Leg Total: 196	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Cars 795</td> <td style="border-right: 1px solid black;">93</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Cars 2102</td> </tr> <tr> <td style="border-right: 1px solid black;">Trucks 24</td> <td style="border-right: 1px solid black;">1</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Trucks 21</td> </tr> <tr> <td style="border-right: 1px solid black;">Cyclists 0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Cyclists 0</td> </tr> <tr> <td style="border-right: 1px solid black;">Totals 819</td> <td style="border-right: 1px solid black;">94</td> <td style="border-right: 1px solid black;">↓</td> <td style="border-right: 1px solid black;">Totals 2123</td> </tr> </table>	Cars 795	93	↓	Cars 2102	Trucks 24	1	↓	Trucks 21	Cyclists 0	0	↓	Cyclists 0	Totals 819	94	↓	Totals 2123	Peds Cross: ∅< South Peds: 2 South Entering: 2217 South Leg Total: 3036																
Cars 795	93	↓	Cars 2102																															
Trucks 24	1	↓	Trucks 21																															
Cyclists 0	0	↓	Cyclists 0																															
Totals 819	94	↓	Totals 2123																															

Comments

Ontario Traffic Inc

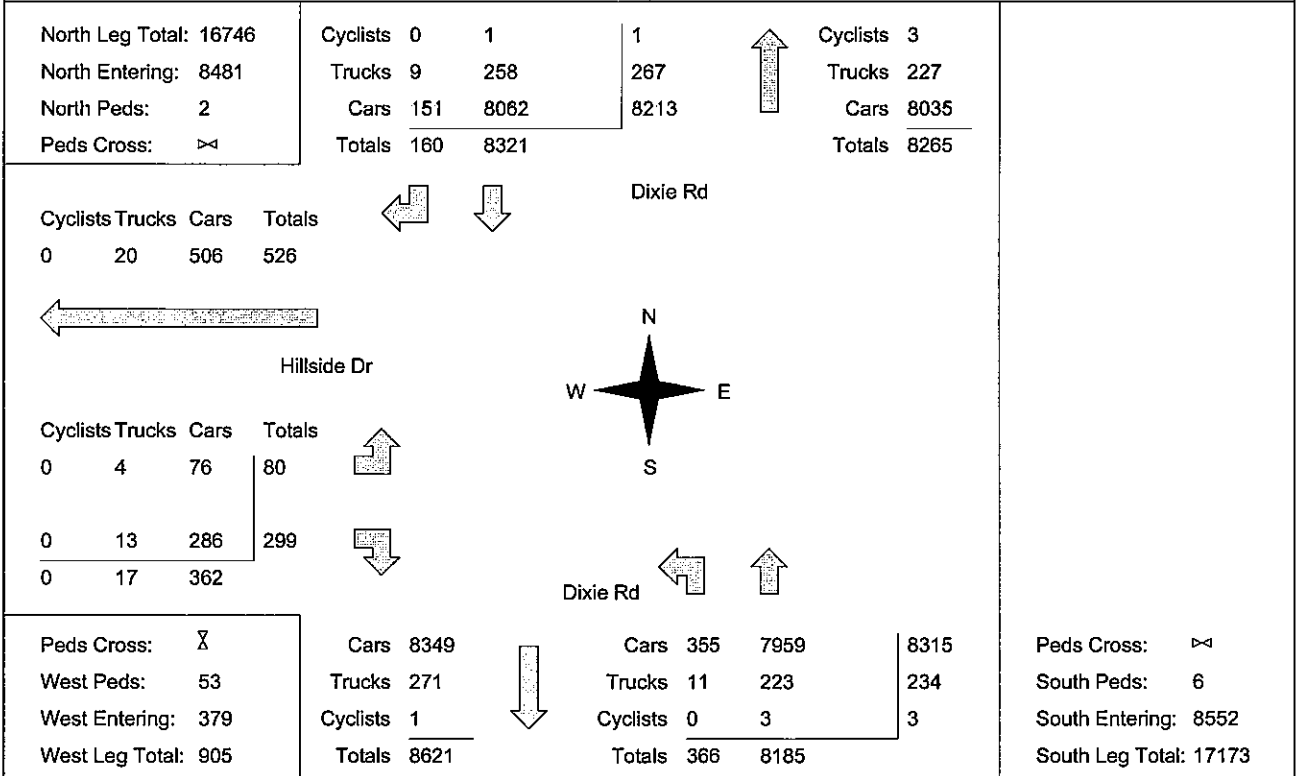
Total Count Diagram

Municipality: Region of Peel
Site #: 0042029800
Intersection: Dixie Rd & Hillside Dr
TFR File #: 5
Count date: 25-Oct-07

Weather conditions:
Person(s) who counted:

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

Major Road: Dixie Rd runs N/S



Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Dixie Rd & Hillside Dr

Count Date: 25-Oct-07

Municipality: Region of Peel

North Approach Totals						South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	2103	18	2121	0	2596	8:00:00	20	455	0	475	0
9:00:00	0	1744	34	1778	1	2276	9:00:00	29	469	0	498	0
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	0	715	6	721	0	1303	12:00:00	25	557	0	582	0
13:00:00	0	707	7	714	0	1435	13:00:00	32	689	0	721	0
14:00:00	0	723	6	729	1	1469	14:00:00	44	696	0	740	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	824	26	850	0	2308	16:00:00	52	1406	0	1458	2
17:00:00	0	748	29	777	0	2712	17:00:00	75	1860	0	1935	1
18:00:00	0	757	34	791	0	2934	18:00:00	89	2053	1	2143	2
Totals:	0	8321	160	8481	2	17033		366	8185	1	8552	6
East Approach Totals						West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	0	0	0	0	0	46	8:00:00	7	0	39	46	7
9:00:00	0	0	0	0	0	81	9:00:00	11	0	70	81	1
11:00:00	0	0	0	0	0	0	11:00:00	0	0	0	0	0
12:00:00	1	0	0	1	0	38	12:00:00	12	0	25	37	4
13:00:00	0	0	0	0	0	32	13:00:00	6	0	26	32	12
14:00:00	0	0	0	0	0	33	14:00:00	3	0	30	33	6
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	0	0	0	0	0	40	16:00:00	11	0	29	40	11
17:00:00	0	0	0	0	0	43	17:00:00	10	0	33	43	8
18:00:00	0	0	0	0	0	67	18:00:00	20	0	47	67	4
Totals:	1	0	0	1	0	380		80	0	299	379	53
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00		14:00	16:00	17:00	18:00			
Crossing Values:	7	12	13	6		5	13	11	22			

Ontario Traffic Inc

Count Date: 25-Oct-07

Intersection: Dixie Rd & Hillside Dr

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S multiple lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #1: Minimum Vehicular Volumes.

A. All Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way	2 Lanes Each Way	3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00			
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	2642	2357	1341	1467	1502	2348	2755	3001	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0
												Total:	800	
												Actual Average (Total/8):	100%	

B. Minor Street Both Approaches.

100%	180	255	180	255	383									100%
80%	143	203	143	203	305	46	81	38	32	33	40	43	67	Yes: No: X
Minor Street Both Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					12	21	10	8	9	10	11	17	99
												Total:	99	
												Actual Average (Total/8):	12%	

Ontario Traffic Inc

Count Date: 25-Oct-07

Intersection: Dixie Rd & Hillside Dr

Municipality: Region of Peel

Major Road: Dixie Rd

Major Road Runs: N/S multiple lanes each way

Operating Speed of Major Road: 60 km/hr

Operating under restricted flow conditions

Warrant #2: Delay to Cross Traffic.

A. Major Street Both Approaches.

Not Satisfied

No. of Lanes	Minimum Requirements					Hours Ending								Percentage Warrant
	1 Lane Each Way		2 Lanes Each Way		3 Lanes	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00	
Flow Condition	1 Lane F. Flow (Code 1)	1 Lane R. Flow (Code 2)	2 Lane F. Flow (Code 3)	2 Lane R. Flow (Code 4)	or More R. Flow (Code 5)									
100%	480	720	600	900	1125									100%
80%	385	575	480	720	900	2596	2276	1303	1435	1469	2308	2712	2934	Yes: X No:
All Approaches	100% Fulfilled					100	100	100	100	100	100	100	100	800
	80% Fulfilled													0
	Actual % if Below 80%													0
												Total:	800	
												Actual Average (Total/8):	100%	

B. Traffic Crossing Major Street.

100%	50	75	50	75	113									100%
80%	40	60	40	60	90	7	12	13	6	5	13	11	22	Yes: X No:
All Approaches	100% Fulfilled													0
	80% Fulfilled													0
	Actual % if Below 80%					6	11	12	5	4	12	10	19	79
												Total:	79	
												Actual Average (Total/8):	10%	

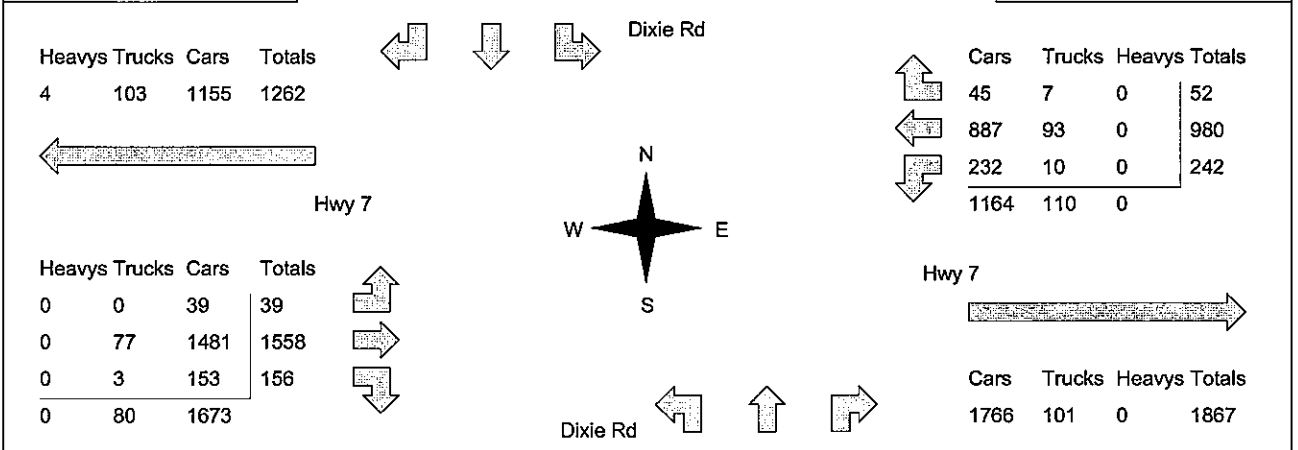
Ontario Traffic Inc

Morning Peak Diagram	Specified Period From: 7:00:00 To: 9:00:00	One Hour Peak From: 7:15:00 To: 8:15:00
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Municipality: Region of Peel Site #: 0042011900 Intersection: Hwy 7 & Dixie Rd TFR File #: 2 Count date: 21-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Hwy 7 runs W/E
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North Leg Total: 2347 North Entering: 1972 North Peds: 1 Peds Cross: 2	<table border="1" style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>6</td><td>24</td><td>4</td><td>34</td></tr> <tr><td>Cars</td><td>103</td><td>1533</td><td>217</td><td>1838</td></tr> <tr><td>Totals</td><td>194</td><td>1557</td><td>221</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	6	24	4	34	Cars	103	1533	217	1838	Totals	194	1557	221			Heavys 0 Trucks 19 Cars 356 Totals 375	East Leg Total: 3141 East Entering: 1274 East Peds: 3 Peds Cross: 8
Heavys	0	0	0	0																				
Trucks	6	24	4	34																				
Cars	103	1533	217	1838																				
Totals	194	1557	221																					



Peds Cross: 8 West Peds: 3 West Entering: 1753 West Leg Total: 3015	<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>1918</td></tr> <tr><td>Trucks</td><td>37</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>1955</td></tr> </table>	Cars	1918	Trucks	37	Heavys	0	Totals	1955		<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>80</td><td>272</td><td>68</td><td>420</td></tr> <tr><td>Trucks</td><td>4</td><td>12</td><td>20</td><td>36</td></tr> <tr><td>Heavys</td><td>4</td><td>0</td><td>0</td><td>4</td></tr> <tr><td>Totals</td><td>88</td><td>284</td><td>88</td><td></td></tr> </table>	Cars	80	272	68	420	Trucks	4	12	20	36	Heavys	4	0	0	4	Totals	88	284	88		Peds Cross: 2 South Peds: 3 South Entering: 460 South Leg Total: 2415
Cars	1918																															
Trucks	37																															
Heavys	0																															
Totals	1955																															
Cars	80	272	68	420																												
Trucks	4	12	20	36																												
Heavys	4	0	0	4																												
Totals	88	284	88																													

Comments

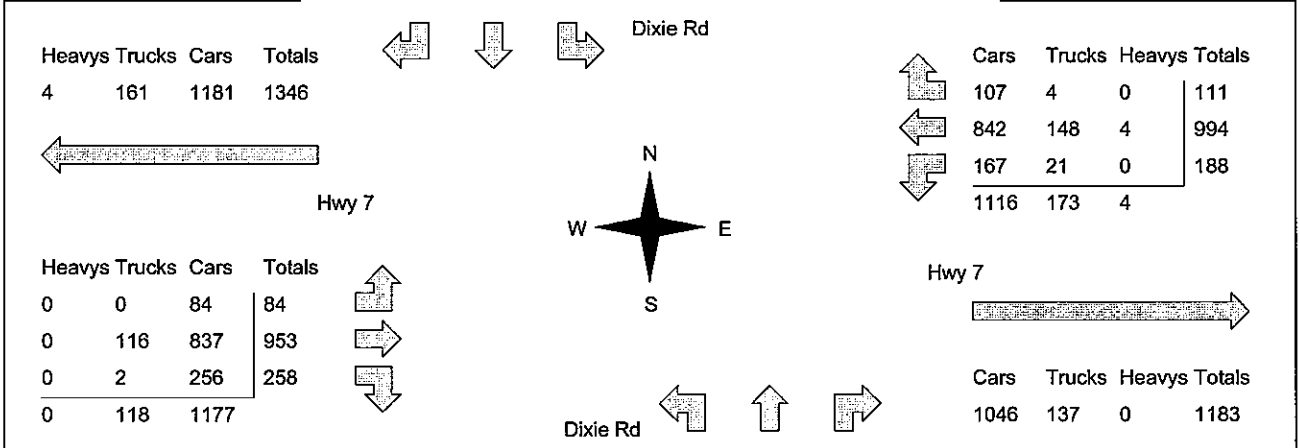
Ontario Traffic Inc

Mid-day Peak Diagram	Specified Period From: 11:00:00 To: 14:00:00	One Hour Peak From: 13:00:00 To: 14:00:00
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Municipality: Region of Peel Site #: 0042011900 Intersection: Hwy 7 & Dixie Rd TFR File #: 2 Count date: 21-Nov-07	Weather conditions: Person(s) who counted:
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** Signalized Intersection **	Major Road: Hwy 7 runs W/E
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North Leg Total: 1340 North Entering: 746 North Peds: 11 Peds Cross: \times	<table border="1" style="margin: auto;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>8</td><td>20</td><td>3</td><td>31</td></tr> <tr><td>Cars</td><td>102</td><td>511</td><td>102</td><td>715</td></tr> <tr><td>Totals</td><td>110</td><td>531</td><td>105</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	8	20	3	31	Cars	102	511	102	715	Totals	110	531	105			Heavys 0 Trucks 16 Cars 578 Totals 594	East Leg Total: 2476 East Entering: 1293 East Peds: 14 Peds Cross: \times
Heavys	0	0	0	0																				
Trucks	8	20	3	31																				
Cars	102	511	102	715																				
Totals	110	531	105																					



Peds Cross: \times West Peds: 1 West Entering: 1295 West Leg Total: 2641	<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>934</td></tr> <tr><td>Trucks</td><td>43</td></tr> <tr><td>Heavys</td><td>0</td></tr> <tr><td>Totals</td><td>977</td></tr> </table>	Cars	934	Trucks	43	Heavys	0	Totals	977		<table border="1" style="margin: auto;"> <tr><td>Cars</td><td>237</td><td>387</td><td>107</td><td>731</td></tr> <tr><td>Trucks</td><td>5</td><td>12</td><td>18</td><td>35</td></tr> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Totals</td><td>242</td><td>399</td><td>125</td><td></td></tr> </table>	Cars	237	387	107	731	Trucks	5	12	18	35	Heavys	0	0	0	0	Totals	242	399	125		Peds Cross: \times South Peds: 1 South Entering: 766 South Leg Total: 1743
Cars	934																															
Trucks	43																															
Heavys	0																															
Totals	977																															
Cars	237	387	107	731																												
Trucks	5	12	18	35																												
Heavys	0	0	0	0																												
Totals	242	399	125																													

Comments

Ontario Traffic Inc

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 16:30:00

To: 17:30:00

Municipality: Region of Peel
Site #: 0042011900
Intersection: Hwy 7 & Dixie Rd
TFR File #: 2
Count date: 21-Nov-07

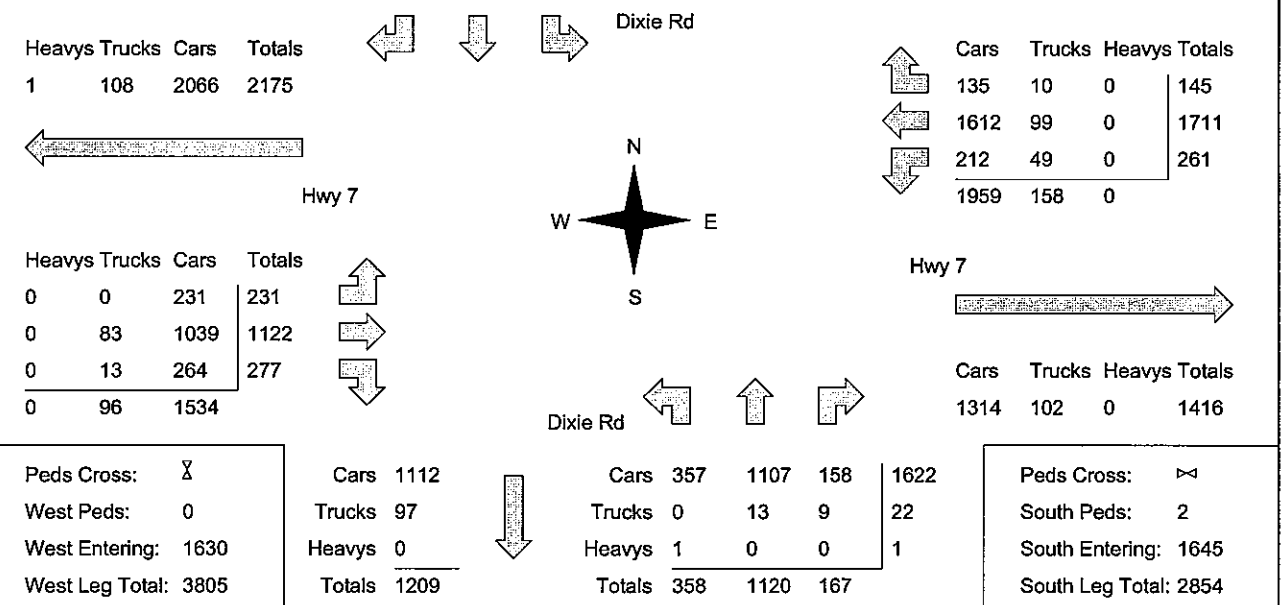
Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hwy 7 runs W/E

North Leg Total: 2400 North Entering: 904 North Peds: 5 Peds Cross: 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Heavys</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Trucks</td><td>9</td><td>35</td><td>10</td><td>54</td></tr> <tr><td>Cars</td><td>97</td><td>636</td><td>117</td><td>850</td></tr> <tr><td>Totals</td><td>106</td><td>671</td><td>127</td><td></td></tr> </table>	Heavys	0	0	0	0	Trucks	9	35	10	54	Cars	97	636	117	850	Totals	106	671	127			Heavys 0 Trucks 23 Cars 1473 Totals 1496	East Leg Total: 3533 East Entering: 2117 East Peds: 12 Peds Cross: 2
Heavys	0	0	0	0																				
Trucks	9	35	10	54																				
Cars	97	636	117	850																				
Totals	106	671	127																					



Comments

Ontario Traffic Inc

Total Count Diagram

Municipality: Region of Peel
Site #: 0042011900
Intersection: Hwy 7 & Dixie Rd
TFR File #: 2
Count date: 21-Nov-07

Weather conditions:
Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hwy 7 runs W/E

North Leg Total: 14441 North Entering: 8223 North Peds: 38 Peds Cross: ⇐	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black;">Heavys</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">0</td> <td style="border-right: 1px solid black;">0</td> </tr> <tr> <td style="border-right: 1px solid black;">Trucks</td> <td style="border-right: 1px solid black;">39</td> <td style="border-right: 1px solid black;">195</td> <td style="border-right: 1px solid black;">26</td> <td style="border-right: 1px solid black;">260</td> </tr> <tr> <td style="border-right: 1px solid black;">Cars</td> <td style="border-right: 1px solid black;">804</td> <td style="border-right: 1px solid black;">5921</td> <td style="border-right: 1px solid black;">1158</td> <td style="border-right: 1px solid black;">7963</td> </tr> <tr> <td style="border-right: 1px solid black;">Totals</td> <td style="border-right: 1px solid black;">923</td> <td style="border-right: 1px solid black;">6116</td> <td style="border-right: 1px solid black;">1184</td> <td style="border-right: 1px solid black;">7963</td> </tr> </table>	Heavys	0	0	0	0	Trucks	39	195	26	260	Cars	804	5921	1158	7963	Totals	923	6116	1184	7963		Heavys 4 Trucks 146 Cars 6068 Totals 6218	East Leg Total: 23234 East Entering: 12079 East Peds: 73 Peds Cross: ✕																			
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Peds Cross: ✕ West Peds: 11 West Entering: 11642 West Leg Total: 23951	Cars 9171 Trucks 432 Heavys 0 Totals 9603		Peds Cross: ⇐ South Peds: 17 South Entering: 7341 South Leg Total: 16944																																								

Comments

Ontario Traffic Inc Traffic Count Summary

Intersection: Hwy 7 & Dixie Rd

Count Date: 21-Nov-07

Municipality: Region of Peel

North Approach Totals						South Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	0	7:00:00	0	0	0	0	0
8:00:00	215	1538	186	1939	0	2364	8:00:00	72	275	78	425	3
9:00:00	235	1199	179	1613	3	2079	9:00:00	78	276	112	466	1
10:00:00	0	0	0	0	0	1	10:00:00	0	1	0	1	0
11:00:00	0	6	1	7	0	20	11:00:00	3	10	0	13	3
12:00:00	107	451	86	644	9	1251	12:00:00	196	303	108	607	2
13:00:00	120	499	84	703	1	1406	13:00:00	234	362	107	703	0
14:00:00	105	531	110	746	11	1512	14:00:00	242	399	125	766	1
15:00:00	0	3	2	5	0	5	15:00:00	0	0	0	0	0
16:00:00	166	583	96	845	8	2082	16:00:00	283	802	152	1237	3
17:00:00	113	582	85	780	2	2251	17:00:00	337	978	156	1471	1
18:00:00	123	724	94	941	4	2593	18:00:00	343	1111	198	1652	3
Totals:	1184	6116	923	8223	38	15564		1788	4517	1036	7341	17
East Approach Totals						West Approach Totals						
Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches	Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total				Left	Thru	Right	Grand Total	
7:00:00	0	0	0	0	0	4	7:00:00	0	4	0	4	0
8:00:00	252	886	32	1170	1	2836	8:00:00	39	1471	156	1666	4
9:00:00	219	1141	56	1416	4	3140	9:00:00	56	1515	153	1724	0
10:00:00	0	10	0	10	0	11	10:00:00	0	1	0	1	0
11:00:00	0	0	0	0	0	44	11:00:00	2	34	8	44	0
12:00:00	168	914	83	1165	9	2312	12:00:00	59	876	212	1147	4
13:00:00	197	1020	80	1297	4	2520	13:00:00	76	890	257	1223	2
14:00:00	188	994	111	1293	14	2588	14:00:00	84	953	258	1295	1
15:00:00	0	0	0	0	0	0	15:00:00	0	0	0	0	0
16:00:00	199	1448	159	1806	19	3312	16:00:00	187	1080	239	1506	0
17:00:00	223	1735	138	2096	5	3635	17:00:00	183	1084	272	1539	0
18:00:00	231	1446	145	1822	17	3315	18:00:00	211	1027	255	1493	0
Totals:	1677	9594	804	12075	73	23717		897	8935	1810	11642	11
Calculated Values for Traffic Crossing Major Street												
Hours Ending:	8:00	9:00	12:00	13:00			14:00	16:00	17:00	18:00		
Crossing Values:	1830	1516	767	859			893	1270	1433	1594		

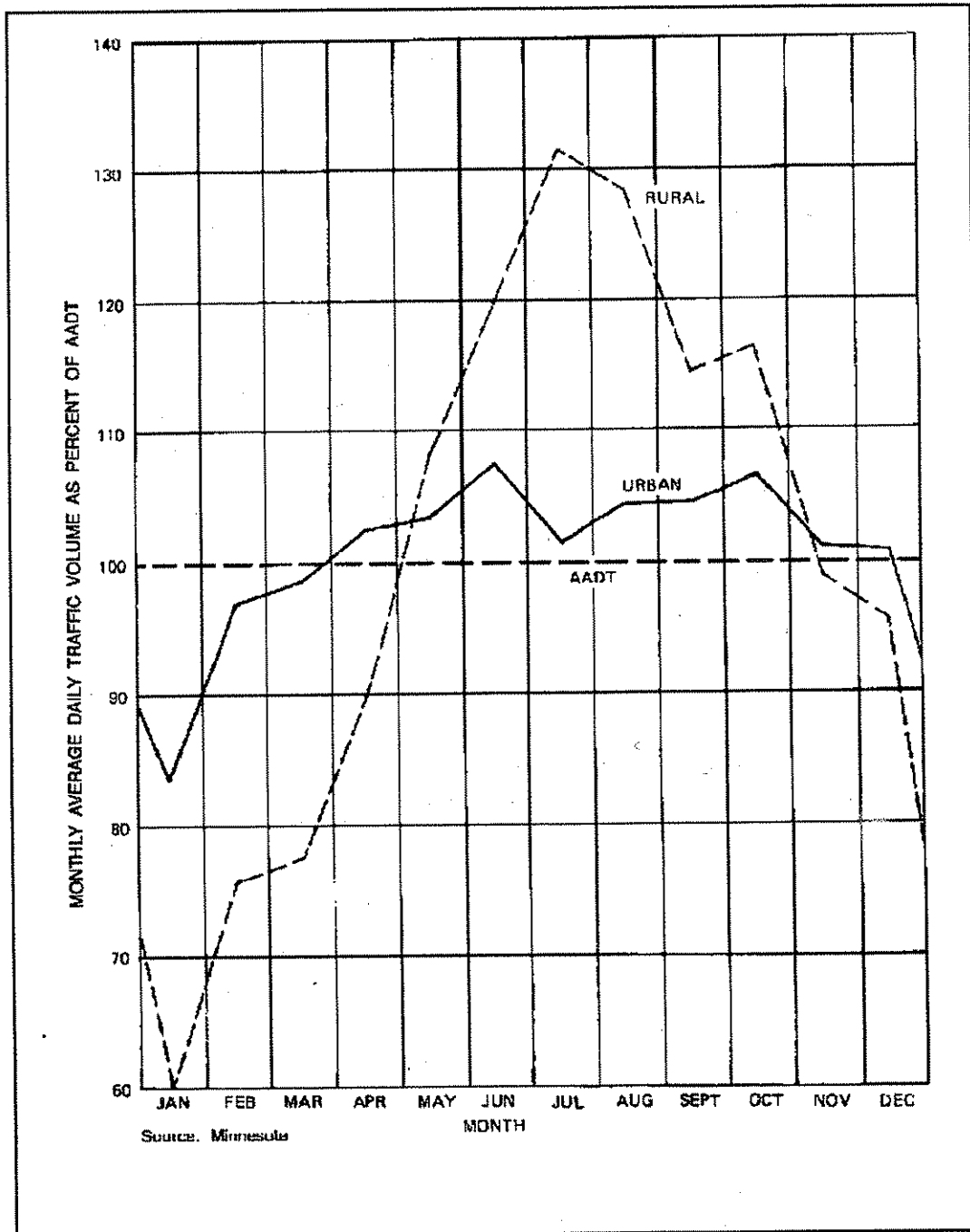


Figure B2-2

Variation of Average Daily Traffic
By Month

Appendix B

Levels of Service Definitions

Level of Service (LOS) Definitions

Signalized Intersection:

Level of Service	Control Delay (seconds)
A	0 – 10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

Source: Highway Capacity Manual (HCM) 2000

Unsignalised Intersection:

Level of Service	Avg. Control Delay (seconds)
A	0 – 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Source: Highway Capacity Manual (HCM) 2000

Appendix C

Existing Conditions –
Intersection Capacity Analysis

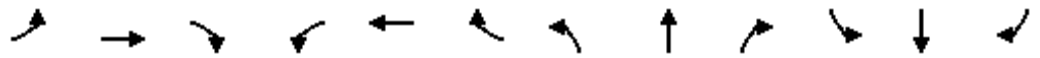


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↗	↖	↖
Volume (vph)	1	43	11	84	45	6	23	271	89	13	815	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.97			0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1683			1665		1547	1588	1219	1825	1638	
Flt Permitted		1.00			0.79		0.16	1.00	1.00	0.57	1.00	
Satd. Flow (perm)		1680			1348		267	1588	1219	1096	1638	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	43	11	84	45	6	23	271	89	13	815	8
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	38	0	0	0
Lane Group Flow (vph)	0	48	0	0	134	0	23	271	51	13	823	0
Heavy Vehicles (%)	0%	14%	0%	17%	2%	0%	18%	21%	34%	0%	17%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1				1
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)		38.8			38.8		68.4	68.4	68.4	68.4	68.4	
Effective Green, g (s)		38.8			38.8		68.4	68.4	68.4	68.4	68.4	
Actuated g/C Ratio		0.32			0.32		0.57	0.57	0.57	0.57	0.57	
Clearance Time (s)		6.2			6.2		6.6	6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		543			436		152	905	695	625	934	
v/s Ratio Prot								0.17			c0.50	
v/s Ratio Perm		0.03			c0.10		0.09		0.04	0.01		
v/c Ratio		0.09			0.31		0.15	0.30	0.07	0.02	0.88	
Uniform Delay, d1		28.3			30.5		12.1	13.4	11.6	11.2	22.3	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.3			1.8		2.1	0.8	0.2	0.1	11.7	
Delay (s)		28.6			32.3		14.2	14.2	11.8	11.3	34.0	
Level of Service		C			C		B	B	B	B	C	
Approach Delay (s)		28.6			32.3			13.7			33.6	
Approach LOS		C			C			B			C	

Intersection Summary

HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

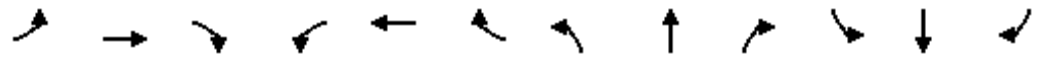
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑	↗	↘	↑	↗
Volume (vph)	38	428	59	102	303	5	30	202	57	26	509	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4		7.4	7.4	7.4	7.4	7.4	7.4
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1573	4902	1570	1615	4625		1659	1865	1399	1751	1865	1498
Flt Permitted	0.56	1.00	1.00	0.49	1.00		0.39	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	923	4902	1570	839	4625		686	1865	1399	1163	1865	1498
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	428	59	102	303	5	30	202	57	26	509	27
RTOR Reduction (vph)	0	0	42	0	2	0	0	0	26	0	0	12
Lane Group Flow (vph)	38	428	17	102	306	0	30	202	31	26	509	15
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	16%	7%	4%	13%	13%	20%	10%	3%	15%	4%	3%	9%
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		1			1			2				2
Permitted Phases	1		1	1			2		2	2		2
Actuated Green, G (s)	24.8	24.8	24.8	24.8	24.8		47.0	47.0	47.0	47.0	47.0	47.0
Effective Green, g (s)	24.8	24.8	24.8	24.8	24.8		47.0	47.0	47.0	47.0	47.0	47.0
Actuated g/C Ratio	0.29	0.29	0.29	0.29	0.29		0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4		7.4	7.4	7.4	7.4	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	264	1404	450	240	1324		372	1012	759	631	1012	813
v/s Ratio Prot		0.09			0.07			0.11			c0.27	
v/s Ratio Perm	0.04		0.01	c0.12			0.04		0.02	0.02		0.01
v/c Ratio	0.14	0.30	0.04	0.42	0.23		0.08	0.20	0.04	0.04	0.50	0.02
Uniform Delay, d1	23.0	24.2	22.3	25.1	23.6		9.5	10.2	9.3	9.3	12.5	9.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3	0.1	2.5	0.2		0.4	0.4	0.1	0.1	1.8	0.0
Delay (s)	23.5	24.4	22.4	27.6	23.8		9.9	10.6	9.4	9.4	14.2	9.2
Level of Service	C	C	C	C	C		A	B	A	A	B	A
Approach Delay (s)		24.1			24.8			10.3			13.8	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	14.8
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕	↗	↖	↕↕	
Volume (vph)	5	5	5	208	0	11	0	340	249	51	927	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00			0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00			1.00			1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.95			0.99			1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1797			1744			3444	1479	1720	3444	
Flt Permitted		0.89			0.73			1.00	1.00	0.55	1.00	
Satd. Flow (perm)		1631			1326			3444	1479	991	3444	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	5	5	208	0	11	0	340	249	51	927	0
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	126	0	0	0
Lane Group Flow (vph)	0	11	0	0	218	0	0	340	123	51	927	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	4%	0%	10%	0%	6%	8%	6%	6%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		18.3			18.3			30.9	30.9	30.9	30.9	
Effective Green, g (s)		18.3			18.3			30.9	30.9	30.9	30.9	
Actuated g/C Ratio		0.29			0.29			0.49	0.49	0.49	0.49	
Clearance Time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		476			387			1697	729	488	1697	
v/s Ratio Prot								0.10			c0.27	
v/s Ratio Perm		0.01			c0.16				0.08	0.05		
v/c Ratio		0.02			0.56			0.20	0.17	0.10	0.55	
Uniform Delay, d1		15.8			18.8			8.9	8.8	8.5	11.0	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			3.1			0.1	0.2	0.2	0.6	
Delay (s)		15.9			21.9			9.1	9.0	8.7	11.7	
Level of Service		B			C			A	A	A	B	
Approach Delay (s)		15.9			21.9			9.1			11.5	
Approach LOS		B			C			A			B	
Intersection Summary												
HCM Average Control Delay			12.0								HCM Level of Service	B
HCM Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			62.7								Sum of lost time (s)	13.5
Intersection Capacity Utilization			71.4%								ICU Level of Service	C
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕↕	↗	↖	↕↕	↗
Volume (vph)	230	1218	279	200	988	127	97	254	82	95	506	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.7		3.0	7.7		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.96	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4933		1721	4982		1652	3444	1387	1720	3444	1519
Flt Permitted	0.18	1.00		0.08	1.00		0.38	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	342	4933		152	4982		660	3444	1387	1077	3444	1519
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	1218	279	200	988	127	97	254	82	95	506	340
RTOR Reduction (vph)	0	31	0	0	13	0	0	0	56	0	0	219
Lane Group Flow (vph)	230	1466	0	200	1102	0	97	254	26	95	506	121
Confl. Peds. (#/hr)	45		63	63		45	28		50	50		28
Heavy Vehicles (%)	3%	2%	1%	6%	3%	1%	9%	6%	10%	2%	6%	3%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	3	8		7	4			2				6
Permitted Phases	8			4			2		2	6		6
Actuated Green, G (s)	60.8	46.4		63.2	47.6		37.0	37.0	37.0	37.0		37.0
Effective Green, g (s)	60.8	46.4		63.2	47.6		37.0	37.0	37.0	37.0		37.0
Actuated g/C Ratio	0.52	0.40		0.54	0.41		0.32	0.32	0.32	0.32		0.32
Clearance Time (s)	3.0	7.7		3.0	7.7		7.0	7.0	7.0	7.0		7.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)	354	1961		292	2032		209	1092	440	341	1092	482
v/s Ratio Prot	0.08	c0.30		c0.09	0.22			0.07				0.15
v/s Ratio Perm	0.26			0.28			c0.15		0.02	0.09		0.08
v/c Ratio	0.65	0.75		0.68	0.54		0.46	0.23	0.06	0.28		0.25
Uniform Delay, d1	16.5	30.1		25.9	26.3		31.9	29.4	27.7	29.9		29.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	5.5	1.9		8.3	0.5		7.2	0.5	0.3	2.0		1.4
Delay (s)	22.1	32.1		34.2	26.8		39.2	29.9	28.0	31.9		30.8
Level of Service	C	C		C	C		D	C	C	C		C
Approach Delay (s)		30.7			27.9			31.6				32.3
Approach LOS		C			C			C				C

Intersection Summary

HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	116.7	Sum of lost time (s)	20.7
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↙	↕	↘	↙	↕
Volume (vph)	143	44	541	41	37	861
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00	0.86	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.94	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1807	1633	3579	1377	1638	3544
Flt Permitted	0.95	1.00	1.00	1.00	0.45	1.00
Satd. Flow (perm)	1807	1633	3579	1377	776	3544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	44	541	41	37	861
RTOR Reduction (vph)	0	35	0	19	0	0
Lane Group Flow (vph)	143	9	541	22	37	861
Confl. Peds. (#/hr)	1			61	61	
Heavy Vehicles (%)	1%	0%	2%	2%	5%	3%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	12.0	12.0	29.7	29.7	28.7	28.7
Effective Green, g (s)	12.0	12.0	29.7	29.7	28.7	28.7
Actuated g/C Ratio	0.21	0.21	0.53	0.53	0.51	0.51
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	386	349	1891	728	396	1810
v/s Ratio Prot	c0.08		0.15			c0.24
v/s Ratio Perm		0.01		0.02	0.05	
v/c Ratio	0.37	0.03	0.29	0.03	0.09	0.48
Uniform Delay, d1	18.9	17.5	7.4	6.3	7.1	8.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1	0.2	0.0	0.2	0.4
Delay (s)	20.1	17.5	7.5	6.4	7.3	9.3
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.5		7.5			9.2
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	15.5
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Volume (vph)	0	0	1	23	1	8	4	437	18	3	977	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes		0.97		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.85		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1580		1640	1665		1825	3444	1458	1825	3544	1432
Flt Permitted		1.00		0.76	1.00		0.29	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)		1580		1307	1665		554	3444	1458	957	3544	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	1	23	1	8	4	437	18	3	977	7
RTOR Reduction (vph)	0	1	0	0	8	0	0	0	3	0	0	1
Lane Group Flow (vph)	0	0	0	23	1	0	4	437	15	3	977	6
Confl. Peds. (#/hr)			13	13								
Heavy Vehicles (%)	0%	0%	0%	9%	0%	0%	0%	6%	12%	0%	3%	14%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		6
Actuated Green, G (s)		6.0		6.0	6.0		87.2	87.2	87.2	87.2	87.2	87.2
Effective Green, g (s)		6.0		6.0	6.0		87.2	87.2	87.2	87.2	87.2	87.2
Actuated g/C Ratio		0.06		0.06	0.06		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)		7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)		5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)		89		73	94		453	2815	1192	782	2896	1170
v/s Ratio Prot		0.00			0.00			0.13			c0.28	
v/s Ratio Perm				c0.02			0.01		0.01	0.00		0.00
v/c Ratio		0.00		0.32	0.02		0.01	0.16	0.01	0.00	0.34	0.00
Uniform Delay, d1		47.5		48.4	47.6		1.8	2.0	1.8	1.8	2.5	1.8
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.0		5.1	0.1		0.0	0.1	0.0	0.0	0.3	0.0
Delay (s)		47.5		53.5	47.7		1.8	2.2	1.8	1.8	2.8	1.8
Level of Service		D		D	D		A	A	A	A	A	A
Approach Delay (s)		47.5			51.9			2.1			2.8	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	3.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	120	117	244	222	81	44	382	18	96	894	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	7.8		7.8	7.8		6.6	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1763	3265		1789	3259		1644	3411	1633	1755	3544	1432
Flt Permitted	0.57	1.00		0.60	1.00		0.26	1.00	1.00	0.53	1.00	1.00
Satd. Flow (perm)	1053	3265		1138	3259		448	3411	1633	971	3544	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	74	120	117	244	222	81	44	382	18	96	894	29
RTOR Reduction (vph)	0	53	0	0	36	0	0	0	8	0	0	12
Lane Group Flow (vph)	74	184	0	244	267	0	44	382	10	96	894	17
Confl. Peds. (#/hr)	38					38						
Heavy Vehicles (%)	1%	5%	2%	2%	8%	1%	11%	7%	0%	4%	3%	14%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		2
Actuated Green, G (s)	33.4	33.4		33.4	33.4		55.1	55.1	55.1	55.1	55.1	55.1
Effective Green, g (s)	33.4	33.4		33.4	33.4		55.1	55.1	55.1	55.1	55.1	55.1
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.54	0.54	0.54	0.54	0.54	0.54
Clearance Time (s)	7.8	7.8		7.8	7.8		6.6	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	342	1060		369	1058		240	1826	874	520	1898	767
v/s Ratio Prot		0.06			0.08			0.11			c0.25	
v/s Ratio Perm	0.07			c0.21			0.10		0.01	0.10		0.01
v/c Ratio	0.22	0.17		0.66	0.25		0.18	0.21	0.01	0.18	0.47	0.02
Uniform Delay, d1	25.2	24.9		29.9	25.6		12.3	12.5	11.2	12.3	14.8	11.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2		5.8	0.3		1.7	0.3	0.0	0.8	0.8	0.1
Delay (s)	25.9	25.0		35.7	25.8		14.0	12.8	11.2	13.1	15.7	11.3
Level of Service	C	C		D	C		B	B	B	B	B	B
Approach Delay (s)		25.2			30.2			12.8			15.3	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	14.4
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	1716	169	237	1239	69	53	225	85	179	919	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.3	6.3	3.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1722	5043	1548	1807	5092	1546	1789	3411	1501	1786	3544	1519
Flt Permitted	0.15	1.00	1.00	0.08	1.00	1.00	0.12	1.00	1.00	0.58	1.00	1.00
Satd. Flow (perm)	280	5043	1548	151	5092	1546	233	3411	1501	1095	3544	1519
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	1716	169	237	1239	69	53	225	85	179	919	112
RTOR Reduction (vph)	0	0	102	0	0	40	0	0	62	0	0	70
Lane Group Flow (vph)	100	1716	67	237	1239	29	53	225	23	179	919	42
Confl. Peds. (#/hr)	3		10	10		3	2		4	4		2
Heavy Vehicles (%)	6%	4%	3%	1%	3%	4%	2%	7%	7%	2%	3%	6%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	56.2	47.3	47.3	63.0	51.1	51.1	38.7	32.3	32.3	41.9	33.9	33.9
Effective Green, g (s)	56.2	47.3	47.3	63.0	51.1	51.1	38.7	32.3	32.3	41.9	33.9	33.9
Actuated g/C Ratio	0.47	0.39	0.39	0.52	0.43	0.43	0.32	0.27	0.27	0.35	0.28	0.28
Clearance Time (s)	3.0	6.3	6.3	3.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	238	1988	610	255	2168	658	158	918	404	428	1001	429
v/s Ratio Prot	0.03	0.34		c0.10	0.24		0.02	0.07		c0.03	c0.26	
v/s Ratio Perm	0.17		0.04	c0.39		0.02	0.09		0.02	0.12		0.03
v/c Ratio	0.42	0.86	0.11	0.93	0.57	0.04	0.34	0.25	0.06	0.42	0.92	0.10
Uniform Delay, d1	19.0	33.4	23.0	34.3	26.1	20.2	30.7	34.3	32.5	28.4	41.7	31.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	5.3	0.4	38.6	1.1	0.1	2.6	0.3	0.1	1.4	13.4	0.2
Delay (s)	21.5	38.6	23.4	72.9	27.2	20.3	33.3	34.6	32.7	29.8	55.1	32.0
Level of Service	C	D	C	E	C	C	C	C	C	C	E	C
Approach Delay (s)		36.5			33.9			34.0			49.2	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Volume (veh/h)	18	0	70	65	2	20	16	337	17	14	1271	21
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	18	0	70	65	2	20	16	337	17	14	1271	21
Pedestrians		4			6							2
Lane Width (m)		3.7			3.7							3.7
Walking Speed (m/s)		1.2			1.2							1.2
Percent Blockage		0			1							0
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								394			374	
pX, platoon unblocked	0.76	0.76	0.76	0.76	0.76		0.76					
vC, conflicting volume	1526	1695	640	1117	1708	185	1296			360		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1068	1289	0	531	1305	185	765			360		
tC, single (s)	7.9	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	83	100	92	78	98	98	97			99		
cM capacity (veh/h)	107	120	826	289	118	826	622			1154		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	88	87	184	186	438	847	21
Volume Left	18	65	16	0	14	0	0
Volume Right	70	20	0	17	0	0	21
cSH	348	327	622	1700	1154	1700	1700
Volume to Capacity	0.25	0.27	0.03	0.11	0.01	0.50	0.01
Queue Length 95th (m)	7.5	8.0	0.6	0.0	0.3	0.0	0.0
Control Delay (s)	18.8	20.0	1.2	0.0	0.4	0.0	0.0
Lane LOS	C	C	A		A		
Approach Delay (s)	18.8	20.0	0.6		0.1		
Approach LOS	C	C					

Intersection Summary

Average Delay		2.0					
Intersection Capacity Utilization		63.4%		ICU Level of Service		B	
Analysis Period (min)		15					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↗	↖	↕	↕
Volume (vph)	61	227	10	126	371	9	31	247	41	110	1173	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.2	6.2	6.2	6.2	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1706	3521		1715	3567		1772	3259	1512	1789	3540	
Flt Permitted	0.49	1.00		0.60	1.00		0.14	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	874	3521		1091	3567		270	3259	1512	1127	3540	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	61	227	10	126	371	9	31	247	41	110	1173	70
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	18	0	4	0
Lane Group Flow (vph)	61	234	0	126	379	0	31	247	23	110	1239	0
Confl. Peds. (#/hr)			19	19								
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	12%	8%	2%	2%	6%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1				1
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)	36.1	36.1		36.1	36.1		61.0	61.0	61.0	61.0	61.0	
Effective Green, g (s)	36.1	36.1		36.1	36.1		61.0	61.0	61.0	61.0	61.0	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.2	6.2	6.2	6.2	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	287	1158		359	1173		150	1811	840	626	1967	
v/s Ratio Prot		0.07			0.11			0.08			c0.35	
v/s Ratio Perm	0.07			c0.12			0.11		0.02	0.10		
v/c Ratio	0.21	0.20		0.35	0.32		0.21	0.14	0.03	0.18	0.63	
Uniform Delay, d1	26.6	26.5		28.0	27.7		12.3	11.7	11.0	12.0	16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.4		2.7	0.7		1.4	0.1	0.0	0.3	0.9	
Delay (s)	28.3	26.9		30.6	28.4		13.7	11.8	11.0	12.3	17.6	
Level of Service	C	C		C	C		B	B	B	B	B	
Approach Delay (s)		27.2			29.0			11.9			17.2	
Approach LOS		C			C			B			B	

Intersection Summary

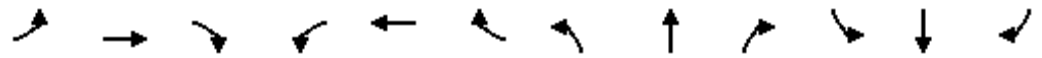
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	12.7
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	1079	132	181	565	44	33	290	77	102	1315	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1701	3503		1722	3483		1722	3368		1769	3579	1534
Flt Permitted	0.38	1.00		0.08	1.00		0.08	1.00		0.50	1.00	1.00
Satd. Flow (perm)	686	3503		148	3483		148	3368		939	3579	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	58	1079	132	181	565	44	33	290	77	102	1315	98
RTOR Reduction (vph)	0	8	0	0	5	0	0	20	0	0	0	15
Lane Group Flow (vph)	58	1203	0	181	604	0	33	347	0	102	1315	83
Confl. Peds. (#/hr)	16		12	12		16	1		2	2		1
Heavy Vehicles (%)	7%	2%	4%	6%	3%	9%	6%	4%	7%	3%	2%	5%
Turn Type	pm+pt			pm+pt			Perm			Perm		Perm
Protected Phases	3	8		7	4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	50.0	46.0		60.0	51.0		49.0	49.0		49.0	49.0	49.0
Effective Green, g (s)	50.0	46.0		60.0	51.0		49.0	49.0		49.0	49.0	49.0
Actuated g/C Ratio	0.41	0.38		0.50	0.42		0.40	0.40		0.40	0.40	0.40
Clearance Time (s)	5.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lane Grp Cap (vph)	317	1332		216	1468		60	1364		380	1449	621
v/s Ratio Prot	0.01	c0.34		c0.08	0.17			0.10			c0.37	
v/s Ratio Perm	0.07			0.34			0.22			0.11		0.05
v/c Ratio	0.18	0.90		0.84	0.41		0.55	0.25		0.27	0.91	0.13
Uniform Delay, d1	21.6	35.4		30.4	24.5		27.6	23.9		24.0	33.9	22.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	9.3		25.9	0.4		31.7	0.4		1.7	9.9	0.4
Delay (s)	22.2	44.7		56.3	24.9		59.3	24.3		25.8	43.7	23.1
Level of Service	C	D		E	C		E	C		C	D	C
Approach Delay (s)		43.7			32.1			27.2			41.2	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	121.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↗	↕↕	↗	↗	↕↕	↗
Volume (vph)	14	10	106	95	17	13	35	312	40	13	1322	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes		0.98			1.00		1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frt		0.89			0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1642			1782		1674	3259	1414	1669	3544	1575
Flt Permitted		0.96			0.68		0.15	1.00	1.00	0.56	1.00	1.00
Satd. Flow (perm)		1590			1261		261	3259	1414	988	3544	1575
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	10	106	95	17	13	35	312	40	13	1322	17
RTOR Reduction (vph)	0	49	0	0	4	0	0	0	15	0	0	3
Lane Group Flow (vph)	0	81	0	0	121	0	35	312	25	13	1322	14
Confl. Peds. (#/hr)	17		4	4			17	5		6	6	
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	9%	12%	11%	8%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		2			2			1				1
Permitted Phases	2			2			1		1	1		1
Actuated Green, G (s)		31.0			31.0		76.0	76.0	76.0	76.0	76.0	76.0
Effective Green, g (s)		31.0			31.0		76.0	76.0	76.0	76.0	76.0	76.0
Actuated g/C Ratio		0.26			0.26		0.63	0.63	0.63	0.63	0.63	0.63
Clearance Time (s)		7.0			7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)		411			326		165	2064	896	626	2245	998
v/s Ratio Prot								0.10			c0.37	
v/s Ratio Perm		0.05			c0.10		0.13		0.02	0.01		0.01
v/c Ratio		0.20			0.37		0.21	0.15	0.03	0.02	0.59	0.01
Uniform Delay, d1		34.8			36.5		9.3	8.9	8.2	8.2	12.9	8.1
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.1			3.2		2.9	0.2	0.1	0.1	1.1	0.0
Delay (s)		35.8			39.7		12.2	9.1	8.3	8.2	14.0	8.2
Level of Service		D			D		B	A	A	A	B	A
Approach Delay (s)		35.8			39.7			9.3			13.9	
Approach LOS		D			D			A			B	

Intersection Summary

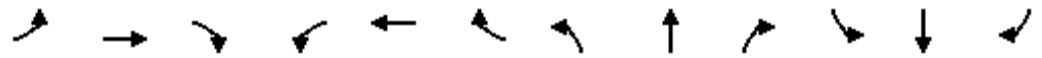
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	43	79	18	397	1568	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	43	79	18	397	1568	35
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)	2					
Upstream signal (m)					349	
pX, platoon unblocked	0.64	0.64	0.64			
vC, conflicting volume	1806	788	1607			
vC1, stage 1 conf vol	1572					
vC2, stage 2 conf vol	234					
vCu, unblocked vol	1146	0	836			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.3	2.2			
p0 queue free %	82	89	97			
cM capacity (veh/h)	244	698	517			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	122	18	198	198	784	784	35
Volume Left	43	18	0	0	0	0	0
Volume Right	79	0	0	0	0	0	35
cSH	422	517	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.03	0.12	0.12	0.46	0.46	0.02
Queue Length 95th (m)	9.0	0.8	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	17.0	12.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B					
Approach Delay (s)	17.0	0.5	0.0				
Approach LOS	C						

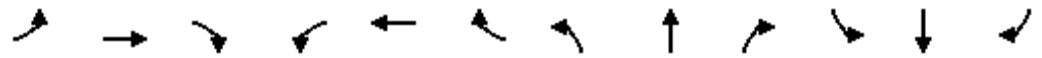
Intersection Summary			
Average Delay			1.1
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	25	461	57	64	198	116	14	329	69	82	1625	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.1	6.1		6.1	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	3508		1738	3332		1825	3336		1752	3571	
Flt Permitted	0.52	1.00		0.33	1.00		0.08	1.00		0.52	1.00	
Satd. Flow (perm)	933	3508		605	3332		155	3336		954	3571	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	461	57	64	198	116	14	329	69	82	1625	16
RTOR Reduction (vph)	0	8	0	0	71	0	0	15	0	0	1	0
Lane Group Flow (vph)	25	510	0	64	243	0	14	383	0	82	1640	0
Confl. Peds. (#/hr)							1		3	3		1
Heavy Vehicles (%)	8%	2%	5%	5%	2%	6%	0%	7%	3%	4%	2%	6%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	31.2	31.2		31.2	31.2		74.5	74.5		74.5	74.5	
Effective Green, g (s)	31.2	31.2		31.2	31.2		74.5	74.5		74.5	74.5	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.63	0.63		0.63	0.63	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.1	6.1		6.1	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	245	923		159	877		97	2096		599	2243	
v/s Ratio Prot		c0.15			0.07			0.11			c0.46	
v/s Ratio Perm	0.03			0.11			0.09			0.09		
v/c Ratio	0.10	0.55		0.40	0.28		0.14	0.18		0.14	0.73	
Uniform Delay, d1	33.1	37.7		36.0	34.7		9.0	9.3		9.0	15.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.4		7.4	0.8		1.4	0.1		0.2	1.5	
Delay (s)	33.9	40.1		43.4	35.5		10.5	9.4		9.2	16.7	
Level of Service	C	D		D	D		B	A		A	B	
Approach Delay (s)		39.8			36.9			9.4			16.3	
Approach LOS		D			D			A			B	

Intersection Summary

HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	118.6	Sum of lost time (s)	12.9
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Volume (vph)	40	1605	161	249	1009	54	91	293	91	228	1398	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	3.0	7.3	7.3	7.7	7.7	7.7	7.7	7.7	7.3
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4995	1573	1755	4812	1425	3248	5043	1304	3471	5142	1558
Flt Permitted	0.25	1.00	1.00	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	482	4995	1573	175	4812	1425	3248	5043	1304	3471	5142	1558
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	1605	161	249	1009	54	91	293	91	228	1398	200
RTOR Reduction (vph)	0	0	108	0	0	33	0	0	70	0	0	110
Lane Group Flow (vph)	40	1605	53	249	1009	21	91	293	21	228	1398	90
Confl. Peds. (#/hr)	1		3	3		1	3		3	3		3
Heavy Vehicles (%)	0%	5%	2%	4%	9%	13%	9%	4%	23%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6		4				6
Actuated Green, G (s)	44.9	39.3	39.3	56.3	47.7	47.7	7.3	27.9	27.9	13.1	33.7	47.7
Effective Green, g (s)	44.9	39.3	39.3	56.3	47.7	47.7	7.3	27.9	27.9	13.1	33.7	47.7
Actuated g/C Ratio	0.37	0.33	0.33	0.47	0.40	0.40	0.06	0.23	0.23	0.11	0.28	0.40
Clearance Time (s)	3.0	7.3	7.3	3.0	7.3	7.3	7.7	7.7	7.7	7.7	7.7	7.3
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	243	1636	515	266	1913	566	198	1172	303	379	1444	619
v/s Ratio Prot	0.01	0.32		c0.11	0.21		0.03	0.06		c0.07	c0.27	
v/s Ratio Perm	0.05		0.03	c0.33		0.02			0.02			0.06
v/c Ratio	0.16	0.98	0.10	0.94	0.53	0.04	0.46	0.25	0.07	0.60	0.97	0.15
Uniform Delay, d1	24.1	40.0	28.1	34.2	27.6	22.1	54.4	37.5	35.9	51.0	42.6	23.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	18.2	0.4	39.1	1.0	0.1	3.5	0.2	0.2	3.9	16.8	0.5
Delay (s)	24.7	58.2	28.5	73.2	28.6	22.2	58.0	37.8	36.1	54.9	59.4	23.6
Level of Service	C	E	C	E	C	C	E	D	D	D	E	C
Approach Delay (s)		54.8			36.8			41.3			54.9	
Approach LOS		D			D			D			D	

Intersection Summary

HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	9	21	6	416	1732	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	21	6	416	1732	6
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)				2		
Upstream signal (m)					179	
pX, platoon unblocked	0.66	0.66	0.66			
vC, conflicting volume	1960	874	1743			
vC1, stage 1 conf vol	1740					
vC2, stage 2 conf vol	220					
vCu, unblocked vol	1432	0	1105			
tC, single (s)	7.2	7.0	4.1			
tC, 2 stage (s)	6.2					
tF (s)	3.7	3.3	2.2			
p0 queue free %	94	97	99			
cM capacity (veh/h)	154	710	422			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	30	6	208	208	1155	583
Volume Left	9	6	0	0	0	0
Volume Right	21	0	0	0	0	6
cSH	340	422	1700	1700	1700	1700
Volume to Capacity	0.09	0.01	0.12	0.12	0.68	0.34
Queue Length 95th (m)	2.2	0.3	0.0	0.0	0.0	0.0
Control Delay (s)	16.6	13.6	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	16.6	0.2			0.0	
Approach LOS	C					

Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			58.1%	ICU Level of Service		B
Analysis Period (min)			15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	8	52	27	450	1744	22
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	52	27	450	1744	22
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh				2	2	
Upstream signal (m)				194		
pX, platoon unblocked	0.97					
vC, conflicting volume	1964	597	1771			
vC1, stage 1 conf vol	1760					
vC2, stage 2 conf vol	204					
vCu, unblocked vol	1896	597	1771			
tC, single (s)	6.8	7.0	4.3			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.3			
p0 queue free %	93	88	91			
cM capacity (veh/h)	122	439	310			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	60	27	150	150	150	698	698	371
Volume Left	8	27	0	0	0	0	0	0
Volume Right	52	0	0	0	0	0	0	22
cSH	326	310	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.09	0.09	0.09	0.09	0.41	0.41	0.22
Queue Length 95th (m)	5.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	18.5	17.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C						
Approach Delay (s)	18.5	1.0				0.0		
Approach LOS	C							

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	44.5%		ICU Level of Service A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↗	↖	↖
Volume (vph)	6	6	2	47	94	24	8	587	42	4	396	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2			6.2		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.98			0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1719			1836		1825	1847	1633	1825	1745	
Flt Permitted		0.89			0.90		0.50	1.00	1.00	0.40	1.00	
Satd. Flow (perm)		1571			1673		952	1847	1633	763	1745	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	6	2	47	94	24	8	587	42	4	396	30
RTOR Reduction (vph)	0	2	0	0	6	0	0	0	12	0	2	0
Lane Group Flow (vph)	0	12	0	0	159	0	8	587	30	4	424	0
Heavy Vehicles (%)	17%	0%	0%	2%	1%	0%	0%	4%	0%	0%	7%	34%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1				1
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)		17.9			17.9		80.0	80.0	80.0	80.0	80.0	
Effective Green, g (s)		17.9			17.9		80.0	80.0	80.0	80.0	80.0	
Actuated g/C Ratio		0.16			0.16		0.72	0.72	0.72	0.72	0.72	
Clearance Time (s)		6.2			6.2		6.6	6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		254			271		688	1335	1180	551	1261	
v/s Ratio Prot								c0.32				0.24
v/s Ratio Perm		0.01			c0.10		0.01		0.02	0.01		
v/c Ratio		0.05			0.59		0.01	0.44	0.03	0.01	0.34	
Uniform Delay, d1		39.2			43.0		4.3	6.2	4.3	4.3	5.6	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			5.0		0.0	1.1	0.0	0.0	0.7	
Delay (s)		39.4			47.9		4.3	7.3	4.4	4.3	6.3	
Level of Service		D			D		A	A	A	A	A	
Approach Delay (s)		39.4			47.9			7.1			6.3	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.7	Sum of lost time (s)	12.8
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘	↑	↗	↘	↑	↗
Volume (vph)	159	479	89	156	283	14	60	528	58	13	184	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	7.4	7.4	7.4	7.4		7.4	7.4	7.4	7.4	7.4	7.4
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1789	4856	1601	1772	4907		1738	1883	1479	1689	1847	1633
Flt Permitted	0.56	1.00	1.00	0.47	1.00		0.64	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	1061	4856	1601	874	4907		1174	1883	1479	629	1847	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	159	479	89	156	283	14	60	528	58	13	184	5
RTOR Reduction (vph)	0	0	59	0	5	0	0	0	25	0	0	2
Lane Group Flow (vph)	159	479	30	156	292	0	60	528	33	13	184	3
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	2%	8%	2%	3%	5%	29%	5%	2%	9%	8%	4%	0%
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		1			1			2				2
Permitted Phases	1		1	1			2		2	2		2
Actuated Green, G (s)	33.8	33.8	33.8	33.8	33.8		52.4	52.4	52.4	52.4	52.4	52.4
Effective Green, g (s)	33.8	33.8	33.8	33.8	33.8		52.4	52.4	52.4	52.4	52.4	52.4
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33		0.52	0.52	0.52	0.52	0.52	0.52
Clearance Time (s)	7.4	7.4	7.4	7.4	7.4		7.4	7.4	7.4	7.4	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	355	1625	536	292	1642		609	977	767	326	958	847
v/s Ratio Prot		0.10			0.06			c0.28			0.10	
v/s Ratio Perm	0.15		0.02	c0.18			0.05		0.02	0.02		0.00
v/c Ratio	0.45	0.29	0.06	0.53	0.18		0.10	0.54	0.04	0.04	0.19	0.00
Uniform Delay, d1	26.3	24.8	22.8	27.2	23.8		12.3	16.2	12.0	11.9	13.0	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.2	0.1	3.4	0.1		0.3	2.1	0.1	0.2	0.4	0.0
Delay (s)	28.2	25.0	22.9	30.6	23.9		12.6	18.4	12.1	12.2	13.4	11.7
Level of Service	C	C	C	C	C		B	B	B	B	B	B
Approach Delay (s)		25.4			26.2			17.3			13.3	
Approach LOS		C			C			B			B	

Intersection Summary

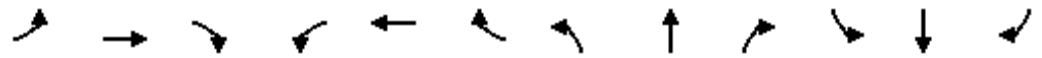
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	101.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕	↗	↖	↕↕	
Volume (vph)	5	5	5	63	0	9	0	656	11	2	388	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00			0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00			1.00			1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.95			0.98			1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1797			1777			3544	1598	1824	3544	
Flt Permitted		0.86			0.74			1.00	1.00	0.40	1.00	
Satd. Flow (perm)		1572			1376			3544	1598	773	3544	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	5	5	63	0	9	0	656	11	2	388	0
RTOR Reduction (vph)	0	4	0	0	5	0	0	0	5	0	0	0
Lane Group Flow (vph)	0	11	0	0	67	0	0	656	6	2	388	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	13%	0%	3%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		6.0			6.0			25.5	25.5	25.5	25.5	
Effective Green, g (s)		6.0			6.0			25.5	25.5	25.5	25.5	
Actuated g/C Ratio		0.13			0.13			0.57	0.57	0.57	0.57	
Clearance Time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		210			183			2008	906	438	2008	
v/s Ratio Prot								c0.19				0.11
v/s Ratio Perm		0.01			c0.05				0.00	0.00		
v/c Ratio		0.05			0.37			0.33	0.01	0.00	0.19	
Uniform Delay, d1		17.0			17.8			5.2	4.2	4.2	4.7	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			2.6			0.2	0.0	0.0	0.1	
Delay (s)		17.2			20.3			5.4	4.2	4.2	4.8	
Level of Service		B			C			A	A	A	A	
Approach Delay (s)		17.2			20.3			5.4			4.8	
Approach LOS		B			C			A			A	

Intersection Summary

HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖↖		↖	↖↖↖		↖	↖↖	↖	↖	↖↖	↖
Volume (vph)	248	1192	87	123	1220	40	190	456	187	35	200	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.7		3.0	7.7		7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	1.00
Frft	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1789	5132		1755	5167		1818	3510	1574	1812	3444	1573
Flt Permitted	0.11	1.00		0.16	1.00		0.63	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	202	5132		302	5167		1198	3510	1574	825	3444	1573
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	248	1192	87	123	1220	40	190	456	187	35	200	351
RTOR Reduction (vph)	0	8	0	0	3	0	0	0	123	0	0	232
Lane Group Flow (vph)	248	1271	0	123	1257	0	190	456	64	35	200	119
Confl. Peds. (#/hr)	5		11	11		5	5		14	14		5
Heavy Vehicles (%)	2%	1%	1%	4%	1%	0%	0%	4%	1%	0%	6%	2%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	3	8		7	4			2				6
Permitted Phases	8			4			2		2	6		6
Actuated Green, G (s)	59.5	46.7		49.0	39.2		38.2	38.2	38.2	38.2	38.2	38.2
Effective Green, g (s)	59.5	46.7		49.0	39.2		38.2	38.2	38.2	38.2	38.2	38.2
Actuated g/C Ratio	0.53	0.42		0.44	0.35		0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	3.0	7.7		3.0	7.7		7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	351	2132		258	1802		407	1193	535	280	1170	535
v/s Ratio Prot	c0.11	0.25		0.04	0.24			0.13			0.06	
v/s Ratio Perm	c0.27			0.17			c0.16		0.04	0.04		0.08
v/c Ratio	0.71	0.60		0.48	0.70		0.47	0.38	0.12	0.12	0.17	0.22
Uniform Delay, d1	23.4	25.5		19.6	31.5		29.1	28.1	25.5	25.6	26.0	26.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.9	0.7		2.9	1.5		3.8	0.9	0.5	0.9	0.3	1.0
Delay (s)	31.3	26.2		22.5	33.0		32.9	29.1	26.0	26.5	26.3	27.5
Level of Service	C	C		C	C		C	C	C	C	C	C
Approach Delay (s)		27.0			32.1			29.3			27.0	
Approach LOS		C			C			C			C	

Intersection Summary

HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	131	45	639	147	63	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frbp, ped/bikes	1.00	0.98	1.00	0.93	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.98	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1615	1374	3411	1400	1455	3318
Flt Permitted	0.95	1.00	1.00	1.00	0.41	1.00
Satd. Flow (perm)	1615	1374	3411	1400	627	3318
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	131	45	639	147	63	420
RTOR Reduction (vph)	0	36	0	49	0	0
Lane Group Flow (vph)	131	9	639	98	63	420
Confl. Peds. (#/hr)	4	23		27	27	
Heavy Vehicles (%)	13%	16%	7%	9%	23%	10%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	9.3	9.3	24.3	24.3	23.3	23.3
Effective Green, g (s)	9.3	9.3	24.3	24.3	23.3	23.3
Actuated g/C Ratio	0.19	0.19	0.51	0.51	0.48	0.48
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	312	266	1723	707	304	1607
v/s Ratio Prot	c0.08		c0.19			0.13
v/s Ratio Perm		0.01		0.07	0.10	
v/c Ratio	0.42	0.03	0.37	0.14	0.21	0.26
Uniform Delay, d1	17.0	15.7	7.2	6.3	7.1	7.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	0.3	0.2	0.7	0.2
Delay (s)	18.9	15.9	7.5	6.5	7.8	7.5
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.1		7.3			7.5
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	14.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	7	20	0	10	43	868	64	9	393	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.96		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1574		1781	1633		1789	3579	1633	1825	3544	1633
Flt Permitted	0.75	1.00		0.75	1.00		0.52	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	1443	1574		1412	1633		979	3579	1633	626	3544	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	0	7	20	0	10	43	868	64	9	393	13
RTOR Reduction (vph)	0	7	0	0	9	0	0	0	7	0	0	2
Lane Group Flow (vph)	1	0	0	20	1	0	43	868	57	9	393	11
Confl. Peds. (#/hr)			15	15								
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	2%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		6
Actuated Green, G (s)	5.7	5.7		5.7	5.7		90.1	90.1	90.1	90.1	90.1	90.1
Effective Green, g (s)	5.7	5.7		5.7	5.7		90.1	90.1	90.1	90.1	90.1	90.1
Actuated g/C Ratio	0.05	0.05		0.05	0.05		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	75	82		74	85		807	2950	1346	516	2921	1346
v/s Ratio Prot		0.00			0.00			c0.24				0.11
v/s Ratio Perm	0.00			c0.01			0.04		0.03	0.01		0.01
v/c Ratio	0.01	0.00		0.27	0.01		0.05	0.29	0.04	0.02	0.13	0.01
Uniform Delay, d1	49.1	49.1		49.8	49.1		1.8	2.2	1.7	1.7	1.9	1.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0		4.1	0.1		0.1	0.3	0.1	0.1	0.1	0.0
Delay (s)	49.3	49.2		53.9	49.2		1.9	2.5	1.8	1.8	2.0	1.7
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		49.2			52.3			2.4			2.0	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	109.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗		↘	↗	↗	↘	↗	↗
Volume (vph)	72	258	40	127	298	45	146	990	77	45	328	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	7.8		7.8	7.8		6.6	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.97	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1759	3546		1789	3483		1807	3579	1633	1789	3510	1633
Flt Permitted	0.52	1.00		0.57	1.00		0.55	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	969	3546		1073	3483		1053	3579	1633	465	3510	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	72	258	40	127	298	45	146	990	77	45	328	13
RTOR Reduction (vph)	0	12	0	0	11	0	0	0	29	0	0	5
Lane Group Flow (vph)	72	286	0	127	332	0	146	990	48	45	328	8
Confl. Peds. (#/hr)	44					44						
Heavy Vehicles (%)	1%	1%	0%	2%	2%	2%	1%	2%	0%	2%	4%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			4			2				2
Permitted Phases	4			4			2		2	2		2
Actuated Green, G (s)	25.3	25.3		25.3	25.3		64.9	64.9	64.9	64.9	64.9	64.9
Effective Green, g (s)	25.3	25.3		25.3	25.3		64.9	64.9	64.9	64.9	64.9	64.9
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.62	0.62	0.62	0.62	0.62	0.62
Clearance Time (s)	7.8	7.8		7.8	7.8		6.6	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	234	858		260	842		653	2221	1013	289	2178	1013
v/s Ratio Prot		0.08			0.10			c0.28				0.09
v/s Ratio Perm	0.07			c0.12			0.14		0.03	0.10		0.00
v/c Ratio	0.31	0.33		0.49	0.39		0.22	0.45	0.05	0.16	0.15	0.01
Uniform Delay, d1	32.5	32.7		34.1	33.2		8.7	10.4	7.8	8.3	8.3	7.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.5		3.0	0.6		0.8	0.7	0.1	1.1	0.1	0.0
Delay (s)	34.0	33.2		37.1	33.9		9.5	11.1	7.8	9.5	8.5	7.6
Level of Service	C	C		D	C		A	B	A	A	A	A
Approach Delay (s)		33.3			34.7			10.7			8.5	
Approach LOS		C			C			B			A	

Intersection Summary

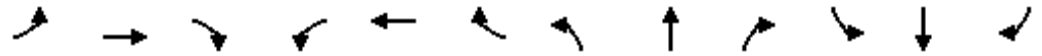
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	104.6	Sum of lost time (s)	14.4
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Volume (vph)	141	1030	71	124	1166	251	140	794	113	50	427	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.3	6.3	6.3	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1772	4948	1517	1753	5092	1580	1807	3510	1580	1722	3476	1526
Flt Permitted	0.16	1.00	1.00	0.27	1.00	1.00	0.40	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	302	4948	1517	491	5092	1580	762	3510	1580	289	3476	1526
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	141	1030	71	124	1166	251	140	794	113	50	427	72
RTOR Reduction (vph)	0	0	33	0	0	121	0	0	78	0	0	53
Lane Group Flow (vph)	141	1030	38	124	1166	130	140	794	35	50	427	19
Confl. Peds. (#/hr)	1		3	3		1			1	1		
Heavy Vehicles (%)	3%	6%	6%	4%	3%	2%	1%	4%	2%	6%	5%	7%
Turn Type	pm+pt		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2			6		7	4		3	8	
Permitted Phases	2		2	6		6	4		4	8		8
Actuated Green, G (s)	62.9	62.9	62.9	52.9	52.9	52.9	39.2	32.2	32.2	36.0	30.6	30.6
Effective Green, g (s)	62.9	62.9	62.9	52.9	52.9	52.9	39.2	32.2	32.2	36.0	30.6	30.6
Actuated g/C Ratio	0.54	0.54	0.54	0.45	0.45	0.45	0.33	0.27	0.27	0.31	0.26	0.26
Clearance Time (s)	3.0	6.3	6.3	6.3	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	250	2656	814	222	2298	713	317	964	434	155	908	398
v/s Ratio Prot	c0.03	0.21			0.23		c0.03	c0.23		0.01	0.12	
v/s Ratio Perm	c0.27		0.03	0.25		0.08	0.12		0.02	0.08		0.01
v/c Ratio	0.56	0.39	0.05	0.56	0.51	0.18	0.44	0.82	0.08	0.32	0.47	0.05
Uniform Delay, d1	15.4	15.9	12.9	23.6	22.9	19.2	28.4	39.8	31.5	30.3	36.5	32.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	0.4	0.1	9.8	0.8	0.6	2.0	6.5	0.2	2.5	0.8	0.1
Delay (s)	20.2	16.3	13.0	33.4	23.7	19.8	30.4	46.3	31.7	32.8	37.3	32.5
Level of Service	C	B	B	C	C	B	C	D	C	C	D	C
Approach Delay (s)		16.6			23.8			42.6			36.2	
Approach LOS		B			C			D			D	

Intersection Summary

HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	117.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Volume (veh/h)	13	1	35	31	1	25	58	1051	55	18	589	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	13	1	35	31	1	25	58	1051	55	18	589	17
Pedestrians					1			1				
Lane Width (m)					3.7			3.7				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								394			374	
pX, platoon unblocked	0.87	0.87	0.93	0.87	0.87	0.83	0.93			0.83		
vC, conflicting volume	1292	1848	296	1562	1838	554	606			1107		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	689	1330	106	1001	1318	67	438			730		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			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 %	95	99	96	80	99	97	94			98		
cM capacity (veh/h)	263	124	873	155	126	824	1025			736		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	49	57	584	580	214	393	17
Volume Left	13	31	58	0	18	0	0
Volume Right	35	25	0	55	0	0	17
cSH	503	239	1025	1700	736	1700	1700
Volume to Capacity	0.10	0.24	0.06	0.34	0.02	0.23	0.01
Queue Length 95th (m)	2.4	6.9	1.4	0.0	0.6	0.0	0.0
Control Delay (s)	12.9	24.7	1.5	0.0	1.1	0.0	0.0
Lane LOS	B	C	A		A		
Approach Delay (s)	12.9	24.7	0.8		0.4		
Approach LOS	B	C					

Intersection Summary		
Average Delay		1.7
Intersection Capacity Utilization	65.6%	ICU Level of Service C
Analysis Period (min)		15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Volume (vph)	99	259	13	82	355	75	94	993	133	59	562	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.2	6.2	6.2	6.2	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1772	3578		1777	3519		1825	3579	1633	1789	3467	
Flt Permitted	0.44	1.00		0.58	1.00		0.39	1.00	1.00	0.22	1.00	
Satd. Flow (perm)	826	3578		1093	3519		742	3579	1633	423	3467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	99	259	13	82	355	75	94	993	133	59	562	57
RTOR Reduction (vph)	0	3	0	0	14	0	0	0	30	0	7	0
Lane Group Flow (vph)	99	269	0	82	416	0	94	993	103	59	612	0
Confl. Peds. (#/hr)			14	14								
Heavy Vehicles (%)	3%	0%	23%	1%	1%	1%	0%	2%	0%	2%	4%	2%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1				1
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)	36.1	36.1		36.1	36.1		61.9	61.9	61.9	61.9	61.9	
Effective Green, g (s)	36.1	36.1		36.1	36.1		61.9	61.9	61.9	61.9	61.9	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.2	6.2	6.2	6.2	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	269	1167		356	1148		415	2001	913	237	1939	
v/s Ratio Prot		0.08			0.12			c0.28			0.18	
v/s Ratio Perm	c0.12			0.08			0.13		0.06	0.14		
v/c Ratio	0.37	0.23		0.23	0.36		0.23	0.50	0.11	0.25	0.32	
Uniform Delay, d1	28.6	27.2		27.2	28.5		12.3	14.9	11.5	12.5	13.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.8	0.5		1.5	0.9		0.6	0.4	0.1	1.2	0.2	
Delay (s)	32.4	27.6		28.7	29.4		12.9	15.3	11.6	13.6	13.3	
Level of Service	C	C		C	C		B	B	B	B	B	
Approach Delay (s)		28.9			29.3			14.7			13.3	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.7	Sum of lost time (s)	12.7
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	602	32	111	958	88	158	1243	42	25	597	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1825	3586		1770	3568		1787	3593		1825	3579	1609
Flt Permitted	0.09	1.00		0.41	1.00		0.36	1.00		0.08	1.00	1.00
Satd. Flow (perm)	172	3586		766	3568		678	3593		148	3579	1609
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	122	602	32	111	958	88	158	1243	42	25	597	42
RTOR Reduction (vph)	0	3	0	0	6	0	0	2	0	0	0	15
Lane Group Flow (vph)	122	631	0	111	1040	0	158	1283	0	25	597	27
Confl. Peds. (#/hr)			2	2			2		4	4		2
Heavy Vehicles (%)	0%	1%	0%	3%	1%	1%	2%	1%	2%	0%	2%	0%
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	3	8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	54.5	54.5		41.7	41.7		52.0	52.0		52.0	52.0	52.0
Effective Green, g (s)	54.5	54.5		41.7	41.7		52.0	52.0		52.0	52.0	52.0
Actuated g/C Ratio	0.46	0.46		0.35	0.35		0.44	0.44		0.44	0.44	0.44
Clearance Time (s)	3.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lane Grp Cap (vph)	216	1649		270	1256		298	1577		65	1571	706
v/s Ratio Prot	c0.05	0.18			c0.29			c0.36			0.17	
v/s Ratio Perm	0.21			0.14			0.23			0.17		0.02
v/c Ratio	0.56	0.38		0.41	0.83		0.53	0.81		0.38	0.38	0.04
Uniform Delay, d1	23.7	21.0		29.1	35.1		24.3	29.0		22.4	22.4	19.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	0.3		2.1	5.2		6.6	4.7		16.3	0.7	0.1
Delay (s)	29.1	21.3		31.2	40.3		30.9	33.7		38.8	23.1	19.1
Level of Service	C	C		C	D		C	C		D	C	B
Approach Delay (s)		22.6			39.5			33.4			23.4	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕		↗	↕↕	↗	↗	↗	↕↕	↗
Volume (vph)	10	11	59	52	6	13	94	1198	109	10	660	33	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		7.0			7.0		6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00	
Frbp, ped/bikes		0.98			0.99		1.00	1.00	0.97	1.00	1.00	0.97	
Flpb, ped/bikes		1.00			0.99		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.90			0.98		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.99			0.96		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1639			1756		1821	3614	1559	1824	3579	1590	
Flt Permitted		0.97			0.75		0.38	1.00	1.00	0.19	1.00	1.00	
Satd. Flow (perm)		1593			1356		731	3614	1559	359	3579	1590	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj. Flow (vph)	10	11	59	52	6	13	94	1198	109	10	660	33	
RTOR Reduction (vph)	0	45	0	0	7	0	0	0	22	0	0	11	
Lane Group Flow (vph)	0	35	0	0	64	0	94	1198	87	10	660	22	
Confl. Peds. (#/hr)	18		5	5		18	2		2	2		2	
Heavy Vehicles (%)	11%	0%	2%	2%	0%	0%	0%	1%	2%	0%	2%	0%	
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm	
Protected Phases		2			2			1				1	
Permitted Phases	2			2			1		1	1		1	
Actuated Green, G (s)		28.0			28.0		79.0	79.0	79.0	79.0	79.0	79.0	
Effective Green, g (s)		28.0			28.0		79.0	79.0	79.0	79.0	79.0	79.0	
Actuated g/C Ratio		0.23			0.23		0.66	0.66	0.66	0.66	0.66	0.66	
Clearance Time (s)		7.0			7.0		6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		372			316		481	2379	1026	236	2356	1047	
v/s Ratio Prot								c0.33				0.18	
v/s Ratio Perm		0.02			c0.05		0.13		0.06	0.03		0.01	
v/c Ratio		0.09			0.20		0.20	0.50	0.08	0.04	0.28	0.02	
Uniform Delay, d1		36.1			37.0		8.0	10.5	7.4	7.2	8.6	7.1	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5			1.4		0.9	0.8	0.2	0.3	0.3	0.0	
Delay (s)		36.6			38.5		8.9	11.2	7.6	7.5	8.9	7.1	
Level of Service		D			D		A	B	A	A	A	A	
Approach Delay (s)		36.6			38.5			10.8			8.8		
Approach LOS		D			D			B			A		

Intersection Summary

HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations							
Volume (veh/h)	20	43	80	1450	722	41	
Sign Control	Stop			Free	Free		
Grade	0%			0%	0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	20	43	80	1450	722	41	
Pedestrians	4						
Lane Width (m)	3.7						
Walking Speed (m/s)	1.2						
Percent Blockage	0						
Right turn flare (veh)							
Median type				TWLTL	None		
Median storage (veh)	2						
Upstream signal (m)					349		
pX, platoon unblocked	0.91	0.91	0.91				
vC, conflicting volume	1611	365	767				
vC1, stage 1 conf vol	726						
vC2, stage 2 conf vol	885						
vCu, unblocked vol	1465	89	533				
tC, single (s)	6.9	7.0	4.2				
tC, 2 stage (s)	5.9						
tF (s)	3.5	3.3	2.2				
p0 queue free %	93	95	91				
cM capacity (veh/h)	281	850	911				

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	80	725	725	361	361	41
Volume Left	20	80	0	0	0	0	0
Volume Right	43	0	0	0	0	0	41
cSH	518	911	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.09	0.43	0.43	0.21	0.21	0.02
Queue Length 95th (m)	3.1	2.2	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.9	9.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A					
Approach Delay (s)	12.9	0.5	0.0				
Approach LOS	B						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	25	168	92	104	250	119	172	1396	129	68	624	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.1	6.1		6.1	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	3226		1747	3269		1786	3531		1738	3480	
Flt Permitted	0.46	1.00		0.58	1.00		0.38	1.00		0.10	1.00	
Satd. Flow (perm)	851	3226		1069	3269		717	3531		189	3480	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	168	92	104	250	119	172	1396	129	68	624	27
RTOR Reduction (vph)	0	61	0	0	41	0	0	6	0	0	3	0
Lane Group Flow (vph)	25	199	0	104	328	0	172	1519	0	68	648	0
Confl. Peds. (#/hr)	13		17	17		13	5		5	5		5
Heavy Vehicles (%)	4%	7%	4%	3%	5%	6%	2%	2%	1%	5%	4%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	31.2	31.2		31.2	31.2		75.9	75.9		75.9	75.9	
Effective Green, g (s)	31.2	31.2		31.2	31.2		75.9	75.9		75.9	75.9	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.63	0.63		0.63	0.63	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.1	6.1		6.1	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	221	839		278	850		454	2233		120	2201	
v/s Ratio Prot		0.06			c0.10			c0.43			0.19	
v/s Ratio Perm	0.03			0.10			0.24			0.36		
v/c Ratio	0.11	0.24		0.37	0.39		0.38	0.68		0.57	0.29	
Uniform Delay, d1	33.9	35.0		36.4	36.5		10.7	14.2		12.6	10.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.7		3.8	1.3		1.1	1.1		9.7	0.2	
Delay (s)	34.9	35.7		40.2	37.8		11.8	15.3		22.3	10.1	
Level of Service	C	D		D	D		B	B		C	B	
Approach Delay (s)		35.6			38.4			15.0			11.3	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Volume (vph)	238	1156	285	269	1762	149	369	1308	172	131	588	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	3.0	7.3	7.3	7.7	7.7	7.7	7.7	7.7	7.3
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4902	1531	1534	4948	1494	3541	5193	1502	3278	4948	1512
Flt Permitted	0.11	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	211	4902	1531	173	4948	1494	3541	5193	1502	3278	4948	1512
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	238	1156	285	269	1762	149	369	1308	172	131	588	109
RTOR Reduction (vph)	0	0	184	0	0	95	0	0	124	0	0	69
Lane Group Flow (vph)	238	1156	101	269	1762	54	369	1308	48	131	588	40
Confl. Peds. (#/hr)	5		2	2		5			12	12		
Heavy Vehicles (%)	0%	7%	5%	19%	6%	7%	0%	1%	5%	8%	6%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot		Perm	Prot		custom
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			6
Actuated Green, G (s)	48.5	36.5	36.5	58.7	43.7	43.7	15.8	31.3	31.3	7.3	22.8	43.7
Effective Green, g (s)	48.5	36.5	36.5	58.7	43.7	43.7	15.8	31.3	31.3	7.3	22.8	43.7
Actuated g/C Ratio	0.40	0.30	0.30	0.49	0.36	0.36	0.13	0.26	0.26	0.06	0.19	0.36
Clearance Time (s)	3.0	7.3	7.3	3.0	7.3	7.3	7.7	7.7	7.7	7.7	7.7	7.3
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	247	1491	466	302	1802	544	466	1355	392	199	940	551
v/s Ratio Prot	c0.10	0.24		c0.14	c0.36		c0.10	c0.25		0.04	0.12	
v/s Ratio Perm	0.29		0.07	0.29		0.04			0.03			0.03
v/c Ratio	0.96	0.78	0.22	0.89	0.98	0.10	0.79	0.97	0.12	0.66	0.63	0.07
Uniform Delay, d1	31.8	38.0	31.1	32.5	37.7	25.2	50.5	43.8	33.9	55.1	44.7	24.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	47.5	4.0	1.1	27.6	16.6	0.4	10.2	17.0	0.3	10.1	1.8	0.3
Delay (s)	79.3	42.0	32.2	60.1	54.2	25.5	60.7	60.8	34.2	65.3	46.5	25.2
Level of Service	E	D	C	E	D	C	E	E	C	E	D	C
Approach Delay (s)		45.6			53.0			58.3			46.7	
Approach LOS		D			D			E			D	

Intersection Summary

HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	6	16	1640	795	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	3	6	16	1640	795	8
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)				2		
Upstream signal (m)					179	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	1656	406	808			
vC1, stage 1 conf vol	804					
vC2, stage 2 conf vol	852					
vCu, unblocked vol	1547	196	630			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	98			
cM capacity (veh/h)	299	754	886			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	9	16	820	820	530	273
Volume Left	3	16	0	0	0	0
Volume Right	6	0	0	0	0	8
cSH	500	886	1700	1700	1700	1700
Volume to Capacity	0.02	0.02	0.48	0.48	0.31	0.16
Queue Length 95th (m)	0.4	0.4	0.0	0.0	0.0	0.0
Control Delay (s)	12.3	9.1	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.3	0.1			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			55.3%	ICU Level of Service		B
Analysis Period (min)			15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	48	94	1673	771	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	17	48	94	1673	771	37
Pedestrians	2			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh				2	2	
Upstream signal (m)				194		
pX, platoon unblocked	0.76					
vC, conflicting volume	1537	280	810			
vC1, stage 1 conf vol	792					
vC2, stage 2 conf vol	746					
vCu, unblocked vol	605	280	810			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	93	88			
cM capacity (veh/h)	394	715	817			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	65	94	558	558	558	308	308	191
Volume Left	17	94	0	0	0	0	0	0
Volume Right	48	0	0	0	0	0	0	37
cSH	590	817	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.12	0.33	0.33	0.33	0.18	0.18	0.11
Queue Length 95th (m)	2.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	11.9	10.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A						
Approach Delay (s)	11.9	0.5				0.0		
Approach LOS	B							

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix D

Transportation and Transit Master Plan Area

Road Network's Recommendations

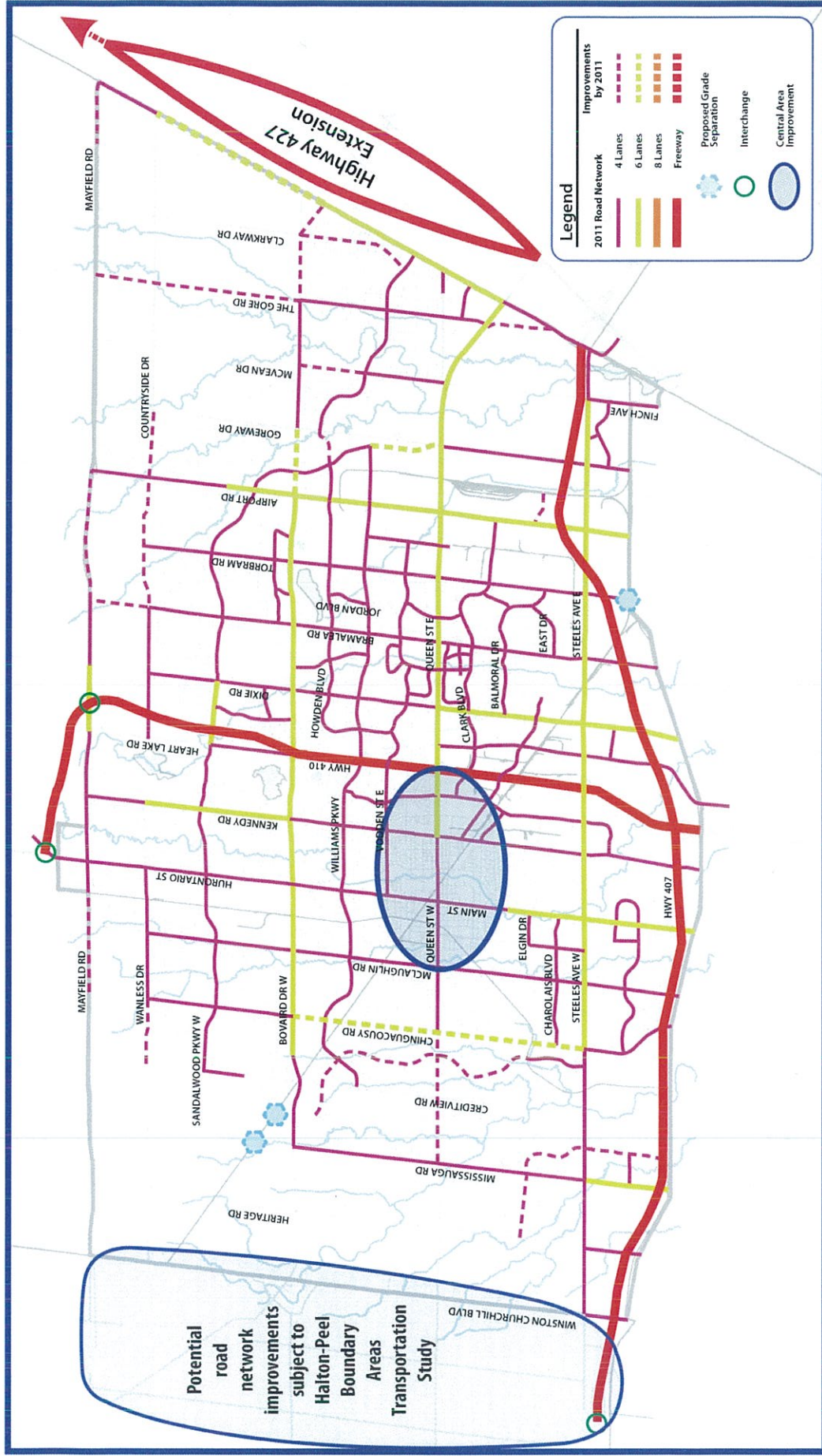


Exhibit 7-8
2011 Road Network

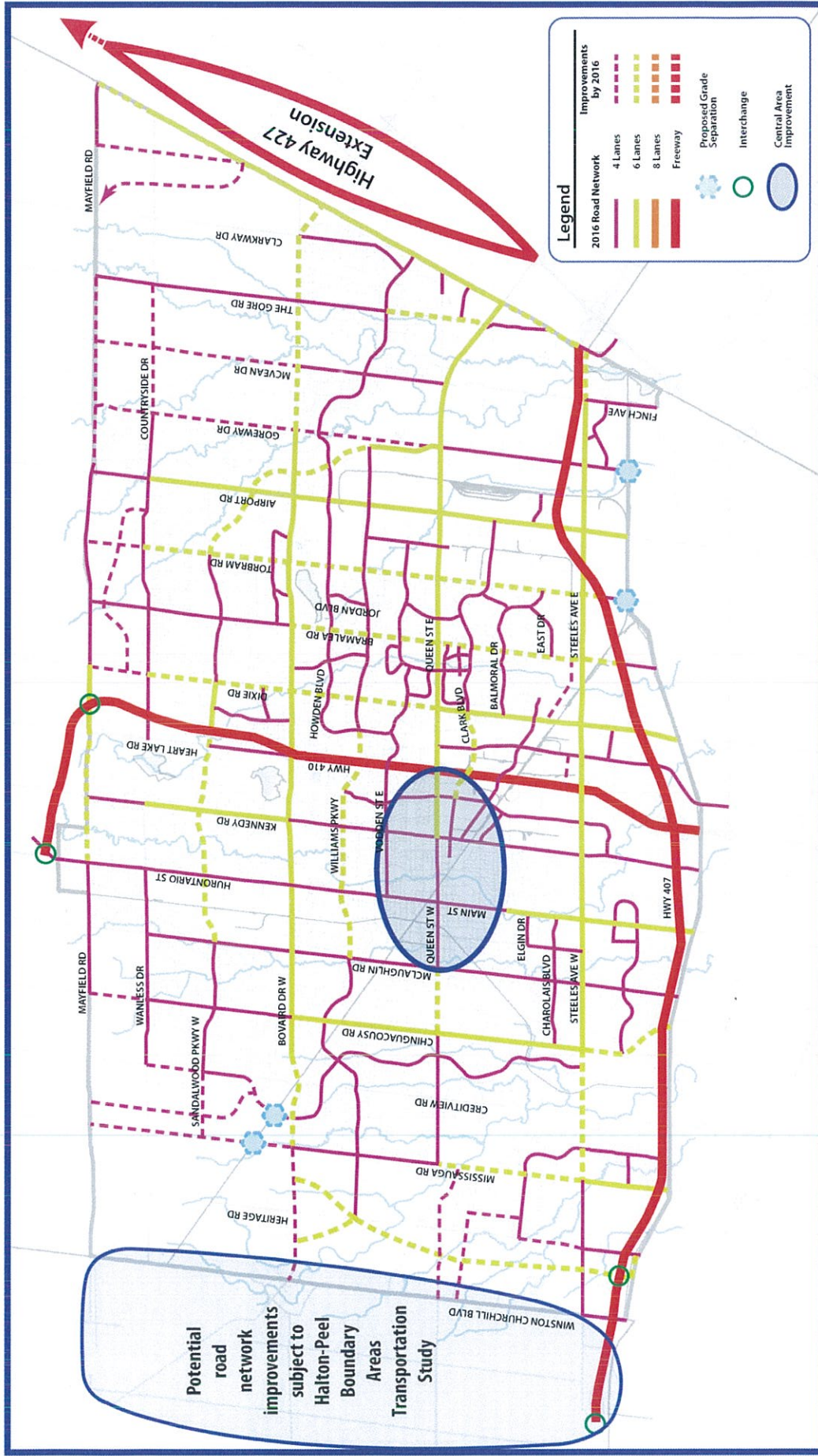


Exhibit 7-9
2016 Road Network

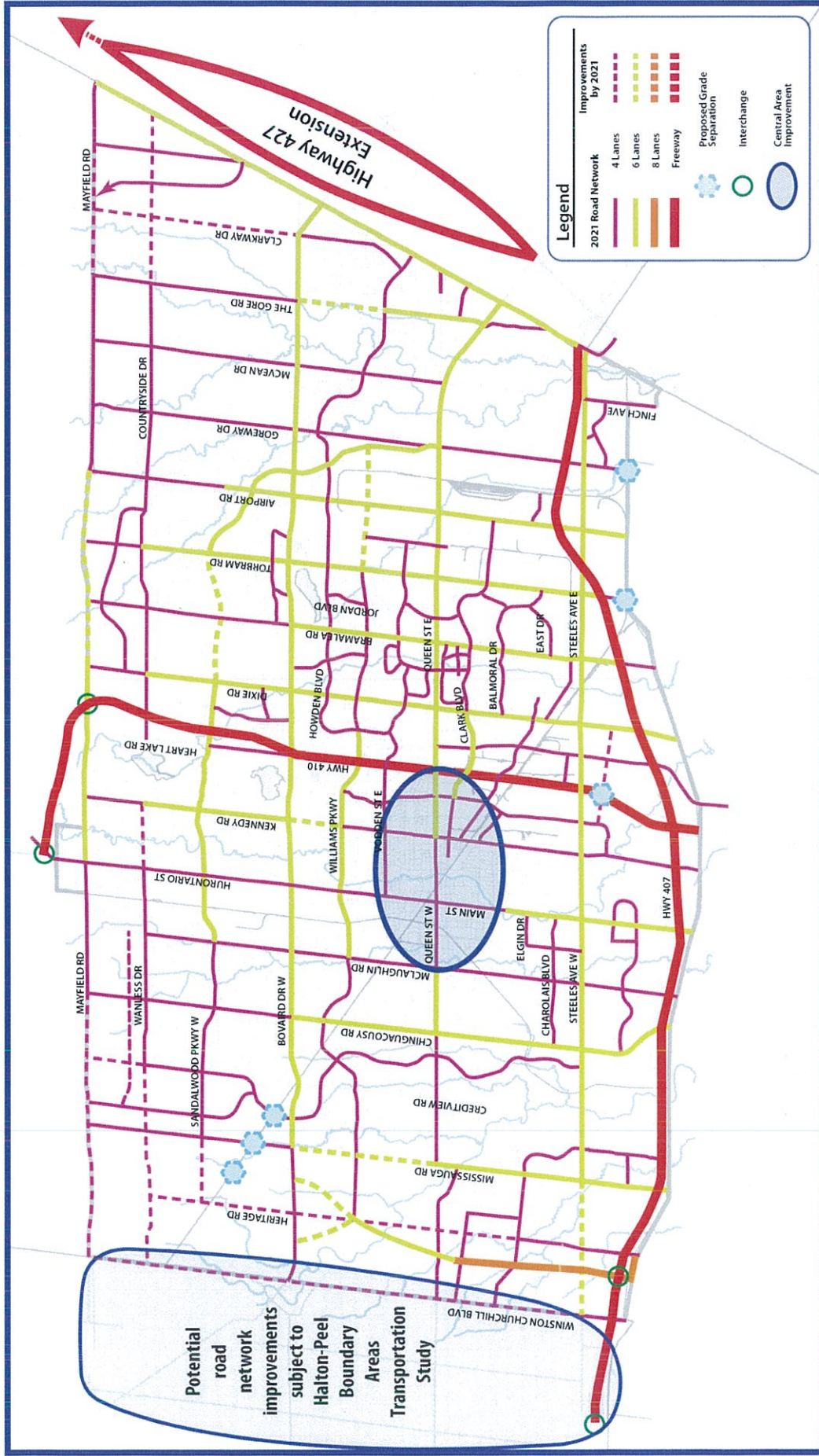


Exhibit 7-10 2021 Road Network

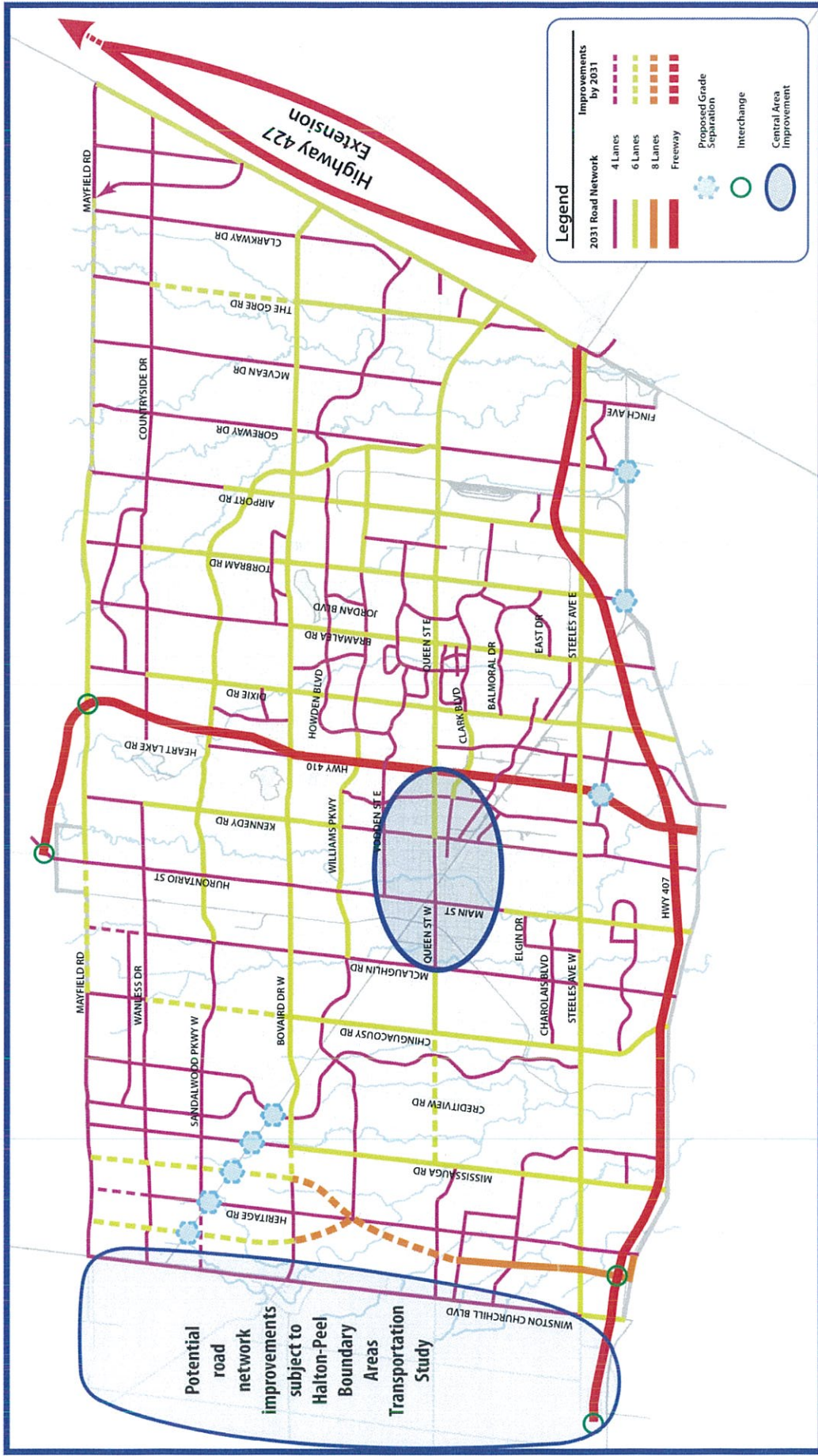


Exhibit 7-7 2031 Road Network

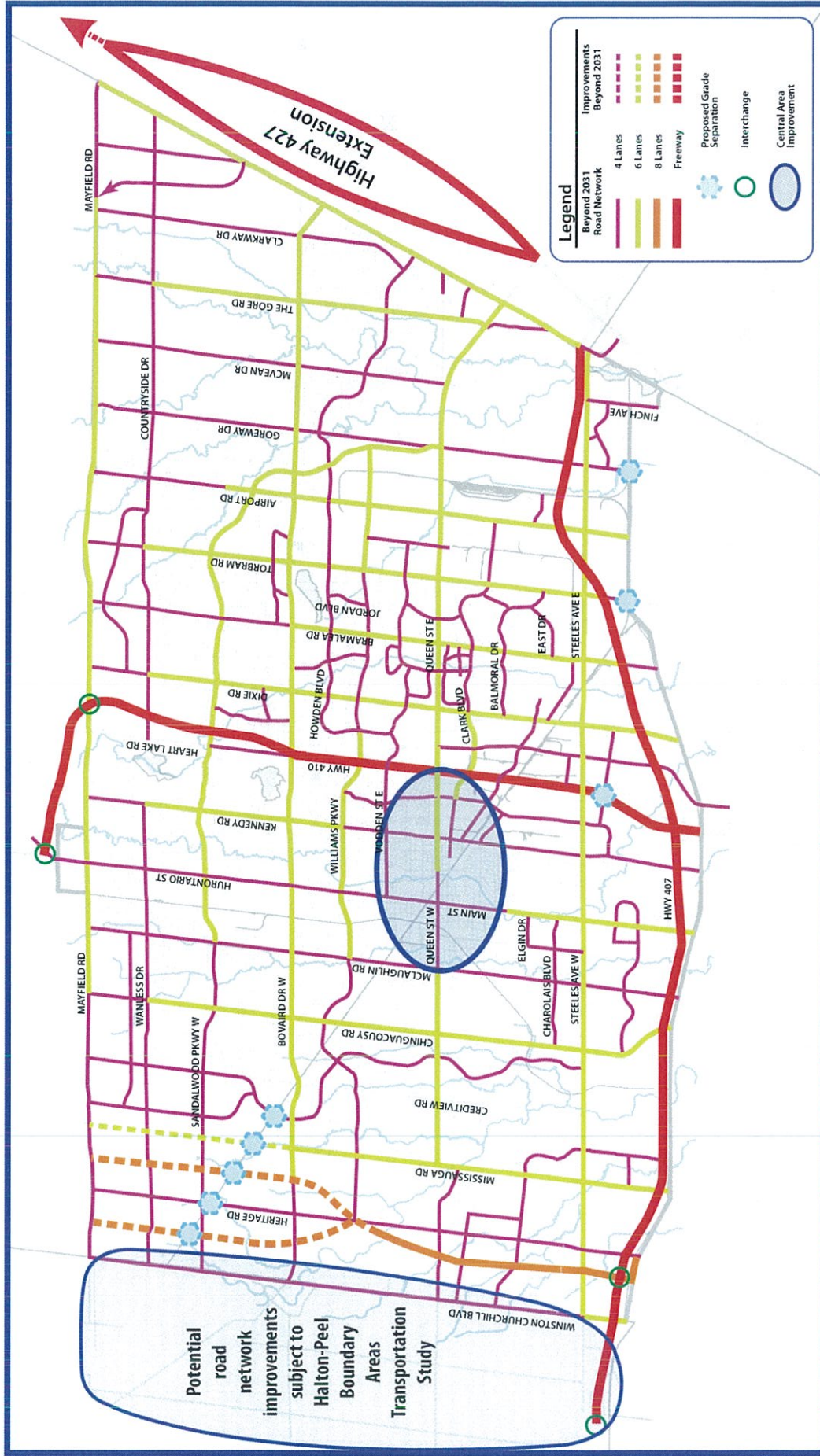
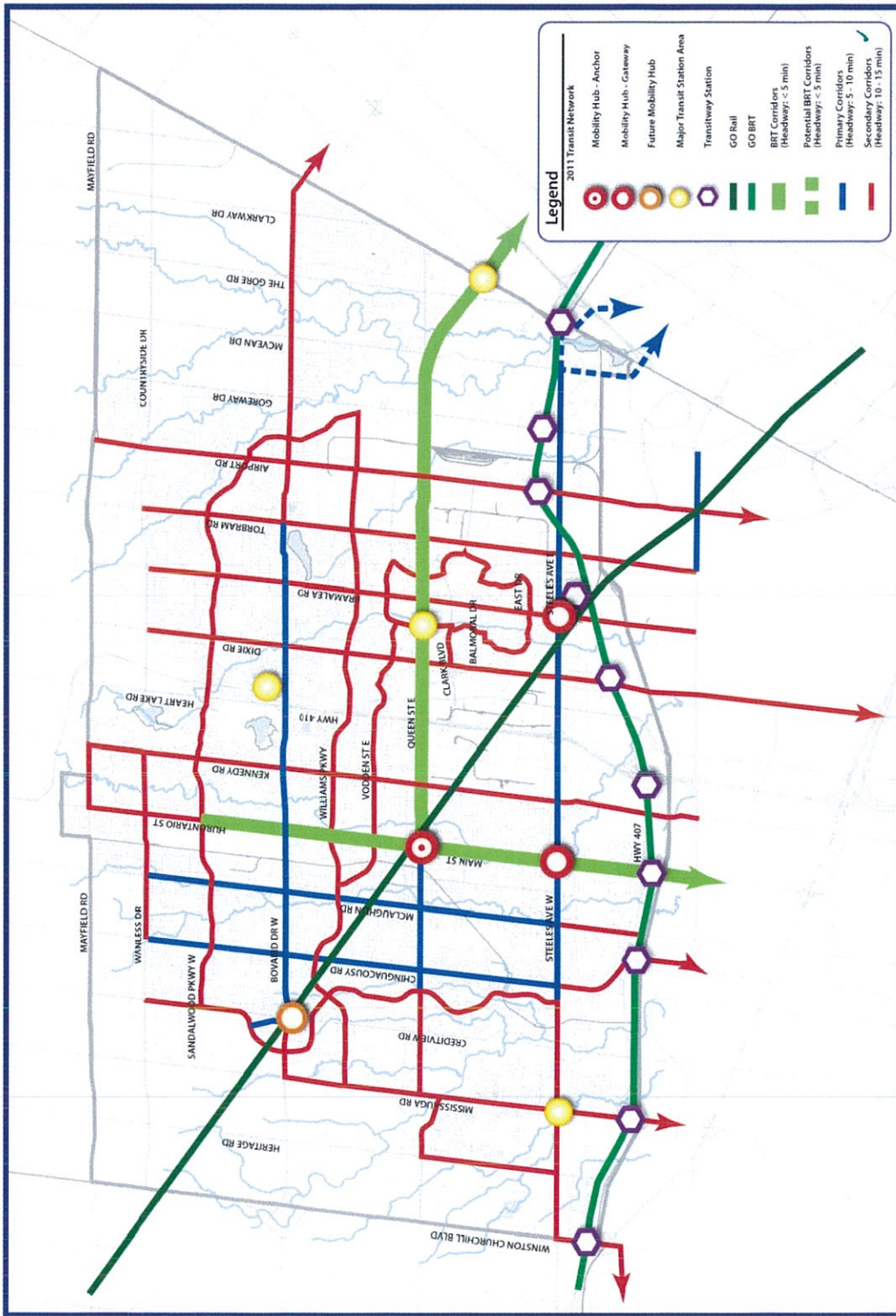


Exhibit 7-11
Beyond 2031 Road Network



BRAMPTON, CA

Exhibit 7-3

2011 Transit Network

iTRANS

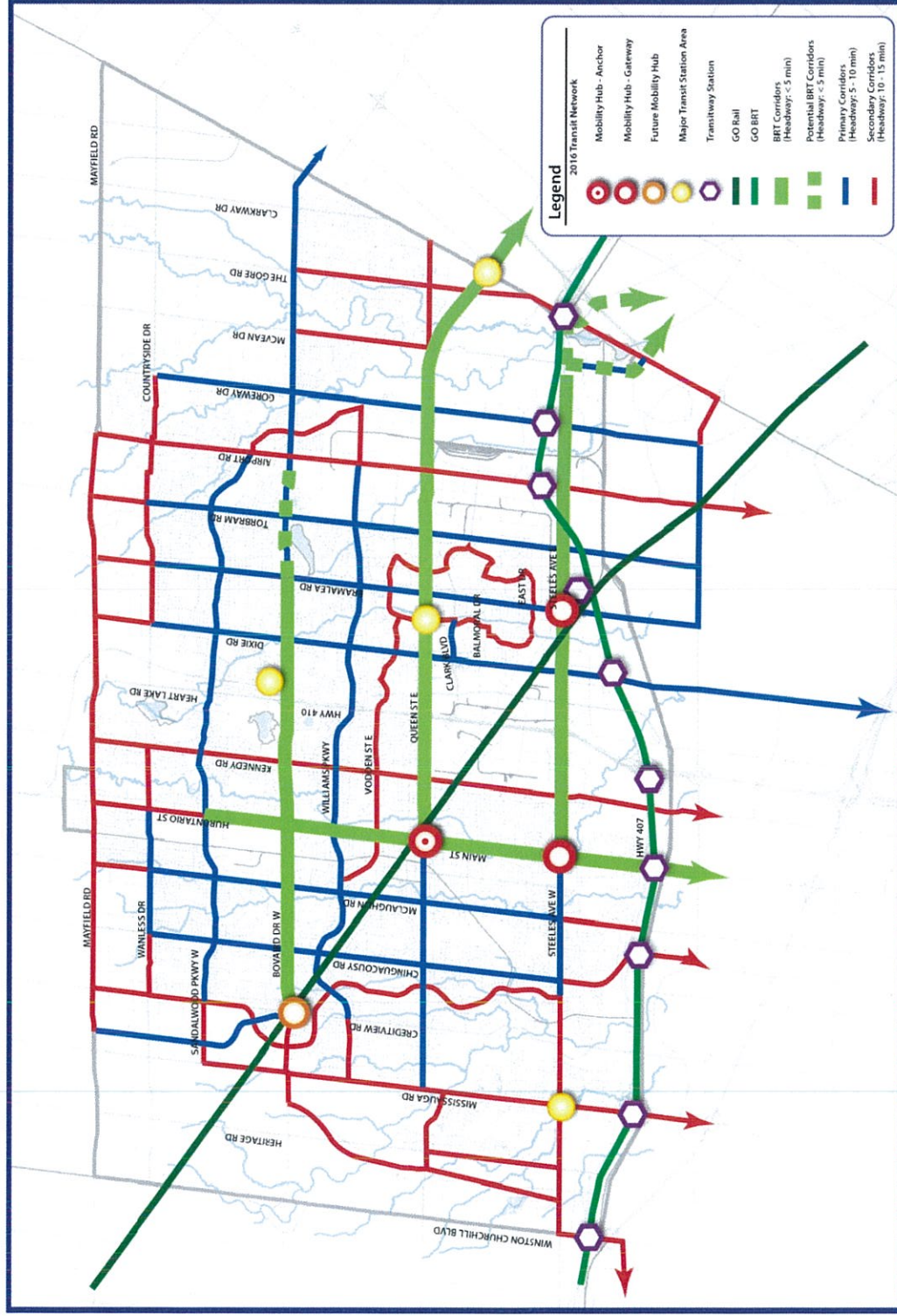


BRAMPTON, CA

Exhibit 7-6

2021 Transit Network

iTRANS



BRAMPTON, CA

Exhibit 7-5 2016 Transit Network



J. S. L.



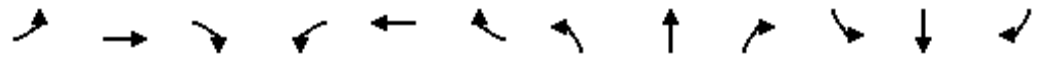
FLORER CITY
BRAMPTON, CA

Exhibit 7-1 2031 Transit Network

iTRANS

Appendix E

2021 Future Conditions –
(Without Dixie Road Improvements)
Intersection Capacity Analysis

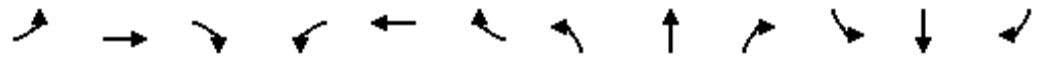


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↗		↗	↕↗		↗	↕	↗	↗	↕↗	↗
Volume (vph)	3	131	42	283	132	17	83	957	295	37	1464	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2		3.0	6.2		3.0	6.2	6.2	3.0	6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1825	3180		1560	3525		1547	1588	1219	1825	1636	
Flt Permitted	0.66	1.00		0.55	1.00		0.06	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	1263	3180		906	3525		91	1588	1219	154	1636	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	131	42	283	132	17	83	957	295	37	1464	25
RTOR Reduction (vph)	0	26	0	0	8	0	0	0	98	0	0	0
Lane Group Flow (vph)	3	147	0	283	141	0	83	957	197	37	1489	0
Heavy Vehicles (%)	0%	14%	0%	17%	2%	0%	18%	21%	34%	0%	17%	25%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	19.8	18.2		32.2	27.6		73.8	71.8	71.8	77.8	73.6	
Effective Green, g (s)	19.8	18.2		32.2	27.6		73.8	71.8	71.8	77.8	73.6	
Actuated g/C Ratio	0.16	0.15		0.26	0.22		0.60	0.58	0.58	0.63	0.60	
Clearance Time (s)	3.0	6.2		3.0	6.2		3.0	6.2	6.2	3.0	6.6	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	210	468		294	787		78	922	708	154	974	
v/s Ratio Prot	0.00	0.05		c0.09	0.04		c0.02	0.60		c0.01	c0.91	
v/s Ratio Perm	0.00			c0.17			0.62		0.16	0.14		
v/c Ratio	0.01	0.31		0.96	0.18		1.06	1.04	0.28	0.24	1.53	
Uniform Delay, d1	43.7	47.1		43.7	38.8		37.1	25.9	12.9	21.6	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.8		42.7	0.5		120.5	39.9	1.0	1.7	243.0	
Delay (s)	43.7	48.9		86.5	39.3		157.6	65.8	13.9	23.3	268.0	
Level of Service	D	D		F	D		F	E	B	C	F	
Approach Delay (s)		48.8			70.2			60.1			262.0	
Approach LOS		D			E			E			F	

Intersection Summary

HCM Average Control Delay	149.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	123.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

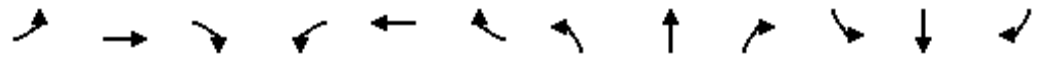
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑		↖	↑	↖	↖	↖	↖
Volume (vph)	502	1162	165	286	821	70	86	647	164	111	1030	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.4	7.4	3.0	7.4		3.0	7.4	7.4	3.0	7.4	
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3052	4902	1570	1615	4564		1659	1865	1398	1755	1789	
Flt Permitted	0.95	1.00	1.00	0.15	1.00		0.09	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3052	4902	1570	262	4564		157	1865	1398	158	1789	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	502	1162	165	286	821	70	86	647	164	111	1030	255
RTOR Reduction (vph)	0	0	84	0	8	0	0	0	83	0	7	0
Lane Group Flow (vph)	502	1162	81	286	883	0	86	647	81	111	1278	0
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	16%	7%	4%	13%	13%	20%	10%	3%	15%	4%	3%	9%
Turn Type	Prot		Perm	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)	20.6	29.9	29.9	45.7	26.0		46.6	44.6	44.6	52.6	47.6	
Effective Green, g (s)	20.6	29.9	29.9	45.7	26.0		46.6	44.6	44.6	52.6	47.6	
Actuated g/C Ratio	0.17	0.25	0.25	0.38	0.22		0.39	0.37	0.37	0.44	0.40	
Clearance Time (s)	6.0	7.4	7.4	3.0	7.4		3.0	7.4	7.4	3.0	7.4	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	524	1221	391	322	989		86	693	520	136	710	
v/s Ratio Prot	c0.16	c0.24		0.15	0.19		0.02	0.35		c0.03	c0.71	
v/s Ratio Perm			0.05	0.19			0.37		0.06	0.33		
v/c Ratio	0.96	0.95	0.21	0.89	0.89		1.00	0.93	0.16	0.82	1.80	
Uniform Delay, d1	49.3	44.3	35.7	31.5	45.6		44.0	36.3	25.1	27.2	36.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	29.2	15.9	0.6	25.7	11.0		97.0	21.3	0.6	33.2	365.5	
Delay (s)	78.5	60.3	36.2	57.3	56.6		141.0	57.6	25.8	60.4	401.7	
Level of Service	E	E	D	E	E		F	E	C	E	F	
Approach Delay (s)		63.1			56.8			59.8			374.5	
Approach LOS		E			E			E			F	

Intersection Summary

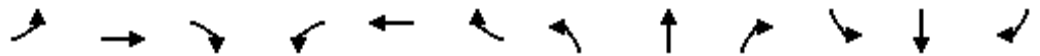
HCM Average Control Delay	143.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕	↗	↖	↕↕	
Volume (vph)	15	15	15	250	20	13	25	1276	364	85	1649	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00			0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00			1.00			1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.95			0.99			1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1796			1756			3444	1478	1722	3438	
Flt Permitted		0.86			0.72			0.80	1.00	0.14	1.00	
Satd. Flow (perm)		1569			1317			2747	1478	251	3438	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	250	20	13	25	1276	364	85	1649	25
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	75	0	1	0
Lane Group Flow (vph)	0	41	0	0	281	0	0	1301	289	85	1673	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	4%	0%	10%	0%	6%	8%	6%	6%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		25.9			25.9			50.7	50.7	50.7	50.7	
Effective Green, g (s)		25.9			25.9			50.7	50.7	50.7	50.7	
Actuated g/C Ratio		0.29			0.29			0.56	0.56	0.56	0.56	
Clearance Time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		451			379			1546	832	141	1935	
v/s Ratio Prot												c0.49
v/s Ratio Perm		0.03			c0.21			0.47	0.20	0.34		
v/c Ratio		0.09			0.74			0.84	0.35	0.60	0.86	
Uniform Delay, d1		23.5			29.1			16.4	10.7	13.0	16.8	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			9.1			4.8	0.5	10.3	4.7	
Delay (s)		23.7			38.1			21.2	11.2	23.3	21.5	
Level of Service		C			D			C	B	C	C	
Approach Delay (s)		23.7			38.1			19.0			21.6	
Approach LOS		C			D			B			C	

Intersection Summary

HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕↔		↔↔	↕↕↔		↔	↕↕	↔	↔	↕↕	↔
Volume (vph)	386	2047	469	336	1659	213	163	1027	138	160	1249	571
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7		5.0	7.7		3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91		0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	4931		3340	4981		1674	3444	1385	1788	3444	1536
Flt Permitted	0.95	1.00		0.95	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	3437	4931		3340	4981		207	3444	1385	221	3444	1536
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	386	2047	469	336	1659	213	163	1027	138	160	1249	571
RTOR Reduction (vph)	0	31	0	0	13	0	0	0	68	0	0	11
Lane Group Flow (vph)	386	2485	0	336	1859	0	163	1027	70	160	1249	560
Confl. Peds. (#/hr)	45		63	63		45	28		50	50		28
Heavy Vehicles (%)	3%	2%	1%	6%	3%	1%	9%	6%	10%	2%	6%	3%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases							2		2	6		6
Actuated Green, G (s)	13.0	43.3		13.0	43.3		41.0	34.0	34.0	41.0	34.0	47.0
Effective Green, g (s)	13.0	43.3		13.0	43.3		41.0	34.0	34.0	41.0	34.0	47.0
Actuated g/C Ratio	0.11	0.36		0.11	0.36		0.34	0.28	0.28	0.34	0.28	0.39
Clearance Time (s)	5.0	7.7		5.0	7.7		3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	372	1779		362	1797		156	976	392	167	976	602
v/s Ratio Prot	c0.11	c0.50		0.10	0.37		c0.06	0.30		0.06	c0.36	0.10
v/s Ratio Perm							0.29		0.05	0.27		0.26
v/c Ratio	1.04	1.40		0.93	1.03		1.04	1.05	0.18	0.96	1.28	0.93
Uniform Delay, d1	53.5	38.4		53.0	38.4		35.8	43.0	32.5	34.8	43.0	34.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	56.7	182.0		30.4	30.6		84.4	43.6	1.0	57.7	133.8	21.9
Delay (s)	110.2	220.3		83.5	69.0		120.2	86.6	33.5	92.4	176.8	56.8
Level of Service	F	F		F	E		F	F	C	F	F	E
Approach Delay (s)		205.7			71.2			85.2			135.4	
Approach LOS		F			E			F			F	

Intersection Summary

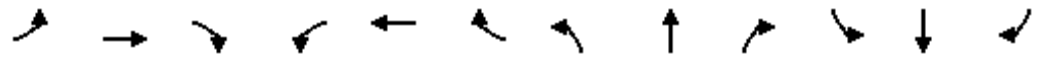
HCM Average Control Delay	134.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.7
Intersection Capacity Utilization	123.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	172	75	1577	51	63	1819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00	0.76	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1807	1633	3579	1223	1738	3544
Flt Permitted	0.95	1.00	1.00	1.00	0.12	1.00
Satd. Flow (perm)	1807	1633	3579	1223	211	3544
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	172	75	1577	51	63	1819
RTOR Reduction (vph)	0	18	0	5	0	0
Lane Group Flow (vph)	172	57	1577	46	63	1819
Confl. Peds. (#/hr)	1			61	61	
Heavy Vehicles (%)	1%	0%	2%	2%	5%	3%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	16.8	16.8	69.9	69.9	68.9	68.9
Effective Green, g (s)	16.8	16.8	69.9	69.9	68.9	68.9
Actuated g/C Ratio	0.17	0.17	0.69	0.69	0.68	0.68
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	300	271	2472	845	144	2413
v/s Ratio Prot	c0.10		0.44			c0.51
v/s Ratio Perm		0.04		0.04	0.30	
v/c Ratio	0.57	0.21	0.64	0.05	0.44	0.75
Uniform Delay, d1	38.9	36.5	8.7	5.0	7.3	10.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	0.8	0.8	0.1	4.4	1.6
Delay (s)	43.1	37.3	9.4	5.1	11.7	12.2
Level of Service	D	D	A	A	B	B
Approach Delay (s)	41.3		9.3			12.2
Approach LOS	D		A			B

Intersection Summary

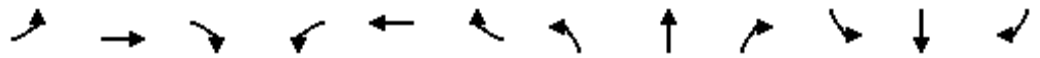
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	101.2	Sum of lost time (s)	15.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Volume (vph)	15	15	15	29	1	14	6	1292	21	5	2001	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1748		1641	1652		1825	3444	1458	1825	3544	1432
Flt Permitted	0.75	1.00		0.74	1.00		0.08	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	1436	1748		1274	1652		149	3444	1458	383	3544	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	29	1	14	6	1292	21	5	2001	12
RTOR Reduction (vph)	0	14	0	0	13	0	0	0	2	0	0	1
Lane Group Flow (vph)	15	16	0	29	2	0	6	1292	19	5	2001	11
Confl. Peds. (#/hr)			13	13								
Heavy Vehicles (%)	0%	0%	0%	9%	0%	0%	0%	6%	12%	0%	3%	14%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.5	6.5		6.5	6.5		86.4	86.4	86.4	86.4	86.4	86.4
Effective Green, g (s)	6.5	6.5		6.5	6.5		86.4	86.4	86.4	86.4	86.4	86.4
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.81	0.81	0.81	0.81	0.81	0.81
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	88	107		78	101		121	2797	1184	311	2878	1163
v/s Ratio Prot		0.01			0.00			0.38				c0.56
v/s Ratio Perm	0.01			c0.02			0.04		0.01	0.01		0.01
v/c Ratio	0.17	0.15		0.37	0.02		0.05	0.46	0.02	0.02	0.70	0.01
Uniform Delay, d1	47.4	47.3		48.0	47.0		2.0	3.0	1.9	1.9	4.3	1.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	1.3		6.1	0.2		0.8	0.6	0.0	0.1	1.4	0.0
Delay (s)	49.3	48.7		54.1	47.1		2.7	3.6	1.9	2.0	5.7	1.9
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		48.9			51.7			3.5			5.7	
Approach LOS		D			D			A			A	

Intersection Summary

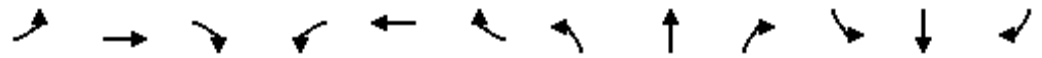
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	106.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Volume (vph)	97	144	149	305	283	104	60	1045	22	121	1834	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.92		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1792	3258		1789	3257		1644	3411	1633	1755	3544	1432
Flt Permitted	0.43	1.00		0.56	1.00		0.07	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	805	3258		1050	3257		117	3411	1633	452	3544	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	144	149	305	283	104	60	1045	22	121	1834	40
RTOR Reduction (vph)	0	90	0	0	35	0	0	0	9	0	0	8
Lane Group Flow (vph)	97	203	0	305	352	0	60	1045	13	121	1834	32
Confl. Peds. (#/hr)	38					38						
Heavy Vehicles (%)	1%	5%	2%	2%	8%	1%	11%	7%	0%	4%	3%	14%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	27.1	19.1		27.1	19.1		63.2	63.2	63.2	56.2	56.2	56.2
Effective Green, g (s)	27.1	19.1		27.1	19.1		63.2	63.2	63.2	56.2	56.2	56.2
Actuated g/C Ratio	0.25	0.18		0.25	0.18		0.59	0.59	0.59	0.52	0.52	0.52
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	276	578		319	578		125	2002	958	236	1849	747
v/s Ratio Prot	0.03	0.06		c0.07	0.11		0.02	c0.31			c0.52	
v/s Ratio Perm	0.06			c0.17			0.26		0.01	0.27		0.02
v/c Ratio	0.35	0.35		0.96	0.61		0.48	0.52	0.01	0.51	0.99	0.04
Uniform Delay, d1	31.9	38.9		38.2	40.9		24.2	13.3	9.3	16.8	25.5	12.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.8		39.2	2.7		6.0	1.0	0.0	7.8	19.1	0.1
Delay (s)	33.6	39.6		77.3	43.5		30.2	14.2	9.3	24.6	44.6	12.7
Level of Service	C	D		E	D		C	B	A	C	D	B
Approach Delay (s)		38.1			58.4			15.0			42.8	
Approach LOS		D			E			B			D	

Intersection Summary

HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	107.7	Sum of lost time (s)	19.2
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Volume (vph)	198	2929	207	309	2139	146	64	733	108	381	1625	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3340	5043	1548	3506	5092	1546	1789	3411	1501	1789	3544	1519
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	3340	5043	1548	3506	5092	1546	214	3411	1501	358	3544	1519
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	198	2929	207	309	2139	146	64	733	108	381	1625	226
RTOR Reduction (vph)	0	0	56	0	0	83	0	0	76	0	0	80
Lane Group Flow (vph)	198	2929	151	309	2139	63	64	733	32	381	1625	146
Confl. Peds. (#/hr)	3		10	10		3	2		4	4		2
Heavy Vehicles (%)	6%	4%	3%	1%	3%	4%	2%	7%	7%	2%	3%	6%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4	8		8
Actuated Green, G (s)	6.0	42.1	42.1	7.0	43.1	43.1	38.4	35.2	35.2	52.2	46.0	46.0
Effective Green, g (s)	6.0	42.1	42.1	7.0	43.1	43.1	38.4	35.2	35.2	52.2	46.0	46.0
Actuated g/C Ratio	0.05	0.35	0.35	0.06	0.36	0.36	0.32	0.29	0.29	0.44	0.38	0.38
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	167	1769	543	205	1829	555	110	1001	440	323	1359	582
v/s Ratio Prot	0.06	c0.58		c0.09	0.42		0.02	0.21		c0.14	c0.46	
v/s Ratio Perm			0.10			0.04	0.17		0.02	0.38		0.10
v/c Ratio	1.19	1.66	0.28	1.51	1.17	0.11	0.58	0.73	0.07	1.18	1.20	0.25
Uniform Delay, d1	57.0	39.0	28.0	56.5	38.5	25.7	33.0	38.2	30.6	27.4	37.0	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	128.3	297.6	1.3	251.9	82.5	0.4	11.6	3.4	0.1	108.2	95.5	0.5
Delay (s)	185.3	336.6	29.3	308.4	121.0	26.1	44.6	41.6	30.8	135.5	132.5	25.7
Level of Service	F	F	C	F	F	C	D	D	C	F	F	C
Approach Delay (s)		308.5			138.0			40.5			122.2	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	187.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	132.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Volume (veh/h)	20	5	80	75	2	22	19	827	20	15	2058	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	5	80	75	2	22	19	827	20	15	2058	23
Pedestrians		4			6						2	
Lane Width (m)		3.7			3.7						3.7	
Walking Speed (m/s)		1.2			1.2						1.2	
Percent Blockage		0			1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								394			374	
pX, platoon unblocked	0.68	0.68	0.63	0.68	0.68	0.91	0.63			0.91		
vC, conflicting volume	2568	2983	1033	2022	2996	432	2085			853		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1743	2351	0	941	2370	164	1557			629		
tC, single (s)	7.9	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	21	78	88	25	91	97	93			98		
cM capacity (veh/h)	25	22	687	100	22	772	254			825		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	105	99	432	434	701	1372	23
Volume Left	20	75	19	0	15	0	0
Volume Right	80	22	0	20	0	0	23
cSH	93	114	254	1700	825	1700	1700
Volume to Capacity	1.13	0.87	0.07	0.26	0.02	0.81	0.01
Queue Length 95th (m)	53.8	39.8	1.8	0.0	0.4	0.0	0.0
Control Delay (s)	216.6	122.5	2.8	0.0	0.5	0.0	0.0
Lane LOS	F	F	A		A		
Approach Delay (s)	216.6	122.5	1.4		0.2		
Approach LOS	F	F					

Intersection Summary	
Average Delay	11.5
Intersection Capacity Utilization	86.4%
ICU Level of Service	E
Analysis Period (min)	15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘	↗	↗	↗↘	
Volume (vph)	78	250	13	156	412	11	40	655	51	135	1977	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1706	3517		1714	3566		1772	3259	1512	1789	3549	
Flt Permitted	0.42	1.00		0.58	1.00		0.07	1.00	1.00	0.32	1.00	
Satd. Flow (perm)	760	3517		1044	3566		128	3259	1512	611	3549	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	250	13	156	412	11	40	655	51	135	1977	90
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	16	0	3	0
Lane Group Flow (vph)	78	260	0	156	422	0	40	655	35	135	2064	0
Confl. Peds. (#/hr)			19	19								
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	12%	8%	2%	2%	6%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	34.5	34.5		34.5	34.5		58.1	58.1	58.1	72.8	72.8	
Effective Green, g (s)	34.5	34.5		34.5	34.5		58.1	58.1	58.1	72.8	72.8	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.48	0.48	0.48	0.61	0.61	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	219	1011		300	1025		62	1578	732	473	2153	
v/s Ratio Prot		0.07			0.12			0.20		0.02	c0.58	
v/s Ratio Perm	0.10			c0.15			0.31		0.02	0.15		
v/c Ratio	0.36	0.26		0.52	0.41		0.65	0.42	0.05	0.29	0.96	
Uniform Delay, d1	33.9	32.9		35.8	34.5		23.2	20.0	16.3	10.8	22.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	0.6		6.3	1.2		41.8	0.8	0.1	0.7	11.4	
Delay (s)	38.4	33.5		42.1	35.8		65.0	20.8	16.5	11.5	33.6	
Level of Service	D	C		D	D		E	C	B	B	C	
Approach Delay (s)		34.6			37.5			22.9			32.3	
Approach LOS		C			D			C			C	

Intersection Summary

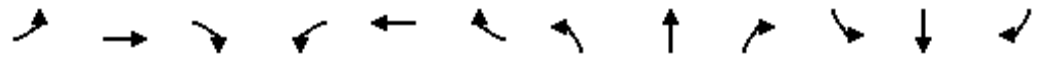
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.7
Intersection Capacity Utilization	122.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	1590	187	261	835	64	47	602	110	147	1981	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1705	3506		1722	3484		1722	3405		1772	3579	1534
Flt Permitted	0.20	1.00		0.08	1.00		0.11	1.00		0.19	1.00	1.00
Satd. Flow (perm)	356	3506		145	3484		204	3405		351	3579	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	83	1590	187	261	835	64	47	602	110	147	1981	140
RTOR Reduction (vph)	0	7	0	0	5	0	0	13	0	0	0	14
Lane Group Flow (vph)	83	1770	0	261	894	0	47	699	0	147	1981	126
Confl. Peds. (#/hr)	16		12	12		16	1		2	2		1
Heavy Vehicles (%)	7%	2%	4%	6%	3%	9%	6%	4%	7%	3%	2%	5%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	57.3	48.6		59.9	49.9		37.2	35.6		47.6	43.0	43.0
Effective Green, g (s)	57.3	48.6		59.9	49.9		37.2	35.6		47.6	43.0	43.0
Actuated g/C Ratio	0.47	0.40		0.49	0.41		0.31	0.29		0.39	0.35	0.35
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lane Grp Cap (vph)	265	1406		202	1434		83	1000		243	1270	544
v/s Ratio Prot	0.02	0.50		c0.11	0.26		0.01	0.21		c0.04	c0.55	
v/s Ratio Perm	0.13			c0.53			0.17			0.19		0.08
v/c Ratio	0.31	1.26		1.29	0.62		0.57	0.70		0.60	1.56	0.23
Uniform Delay, d1	19.3	36.3		35.4	28.2		41.4	38.0		26.3	39.1	27.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	122.4		163.2	1.2		13.8	4.1		6.1	255.8	1.0
Delay (s)	20.7	158.7		198.6	29.4		55.1	42.1		32.5	294.9	28.5
Level of Service	C	F		F	C		E	D		C	F	C
Approach Delay (s)		152.5			67.5			42.9			261.5	
Approach LOS		F			E			D			F	

Intersection Summary

HCM Average Control Delay	163.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	121.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	139.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕	↗	↗	↕	↗
Volume (vph)	16	15	129	117	20	14	47	695	51	14	2092	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes		0.98			1.00		1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.89			0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1647			1784		1674	3259	1414	1686	3544	1575
Flt Permitted		0.96			0.60		0.05	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)		1587			1113		95	3259	1414	663	3544	1575
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	15	129	117	20	14	47	695	51	14	2092	20
RTOR Reduction (vph)	0	74	0	0	3	0	0	0	17	0	0	2
Lane Group Flow (vph)	0	86	0	0	148	0	47	695	34	14	2092	18
Confl. Peds. (#/hr)	17		4	4		17	5		6	6		5
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	9%	12%	11%	8%	3%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		26.0			26.0		78.7	74.0	74.0	75.1		72.7
Effective Green, g (s)		26.0			26.0		78.7	74.0	74.0	75.1		72.7
Actuated g/C Ratio		0.22			0.22		0.65	0.61	0.61	0.62		0.60
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		343			240		124	2003	869	434		2140
v/s Ratio Prot							c0.01	0.21		0.00		c0.59
v/s Ratio Perm		0.05			c0.13		0.23		0.02	0.02		0.01
v/c Ratio		0.25			0.62		0.38	0.35	0.04	0.03		0.98
Uniform Delay, d1		39.1			42.7		28.3	11.4	9.2	8.6		23.1
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.8			11.3		4.0	0.5	0.1	0.1		14.8
Delay (s)		40.9			54.0		32.4	11.8	9.2	8.7		37.9
Level of Service		D			D		C	B	A	A		D
Approach Delay (s)		40.9			54.0			12.9				37.4
Approach LOS		D			D			B				D

Intersection Summary

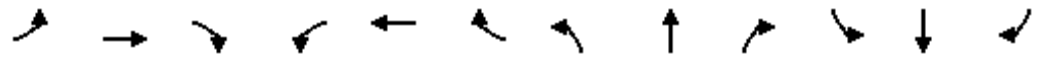
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	106.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	50	90	20	708	2351	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	50	90	20	708	2351	39
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)	2					
Upstream signal (m)					349	
pX, platoon unblocked	0.66	0.66	0.66			
vC, conflicting volume	2749	1180	2394			
vC1, stage 1 conf vol	2355					
vC2, stage 2 conf vol	394					
vCu, unblocked vol	2618	228	2077			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.3	2.2			
p0 queue free %	6	82	89			
cM capacity (veh/h)	53	509	178			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	140	20	354	354	1176	1176	39
Volume Left	50	20	0	0	0	0	0
Volume Right	90	0	0	0	0	0	39
cSH	125	178	1700	1700	1700	1700	1700
Volume to Capacity	1.12	0.11	0.21	0.21	0.69	0.69	0.02
Queue Length 95th (m)	62.5	2.8	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	183.4	27.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	D					
Approach Delay (s)	183.4	0.8	0.0				
Approach LOS	F						

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	35	517	72	72	221	142	18	477	81	103	2251	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	3500		1738	3318		1825	3348		1754	3572	
Flt Permitted	0.47	1.00		0.26	1.00		0.06	1.00		0.40	1.00	
Satd. Flow (perm)	830	3500		477	3318		116	3348		739	3572	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	517	72	72	221	142	18	477	81	103	2251	22
RTOR Reduction (vph)	0	7	0	0	87	0	0	11	0	0	1	0
Lane Group Flow (vph)	35	582	0	72	276	0	18	547	0	103	2272	0
Confl. Peds. (#/hr)							1		3	3		1
Heavy Vehicles (%)	8%	2%	5%	5%	2%	6%	0%	7%	3%	4%	2%	6%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.2	30.2		30.2	30.2		66.2	66.2		76.9	76.9	
Effective Green, g (s)	30.2	30.2		30.2	30.2		66.2	66.2		76.9	76.9	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.55	0.55		0.64	0.64	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	209	881		120	835		64	1847		533	2289	
v/s Ratio Prot		c0.17			0.08			0.16		0.01	c0.64	
v/s Ratio Perm	0.04			0.15			0.16			0.11		
v/c Ratio	0.17	0.66		0.60	0.33		0.28	0.30		0.19	0.99	
Uniform Delay, d1	35.1	40.3		39.6	36.7		14.3	14.4		8.4	21.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	3.9		20.2	1.1		10.7	0.4		0.4	17.1	
Delay (s)	36.8	44.2		59.8	37.7		24.9	14.8		8.8	38.4	
Level of Service	D	D		E	D		C	B		A	D	
Approach Delay (s)		43.8			41.4			15.1			37.1	
Approach LOS		D			D			B			D	

Intersection Summary

HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	2363	229	357	1490	78	129	404	129	327	1938	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	6.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	194	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	2363	229	357	1490	78	129	404	129	327	1938	286
RTOR Reduction (vph)	0	0	87	0	0	47	0	0	104	0	0	105
Lane Group Flow (vph)	57	2363	142	357	1490	31	129	404	25	327	1938	181
Confl. Peds. (#/hr)	1		3	3		1	3		3	3		3
Heavy Vehicles (%)	0%	5%	2%	4%	9%	13%	9%	4%	23%	2%	2%	3%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	45.3	39.7	39.7	11.0	48.1	48.1	5.0	23.7	23.7	17.6	36.3	36.3
Effective Green, g (s)	45.3	39.7	39.7	11.0	48.1	48.1	5.0	23.7	23.7	17.6	36.3	36.3
Actuated g/C Ratio	0.38	0.33	0.33	0.09	0.40	0.40	0.04	0.20	0.20	0.15	0.30	0.30
Clearance Time (s)	3.0	7.3	7.3	6.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	149	1653	520	312	1929	571	135	996	258	509	1555	471
v/s Ratio Prot	0.02	c0.47		c0.10	0.31		0.04	0.08		c0.09	c0.38	
v/s Ratio Perm	0.13		0.09			0.02			0.02			0.12
v/c Ratio	0.38	1.43	0.27	1.14	0.77	0.05	0.96	0.41	0.10	0.64	1.25	0.38
Uniform Delay, d1	25.2	40.1	29.5	54.5	31.2	22.0	57.4	42.0	39.4	48.2	41.9	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	196.8	1.3	95.9	3.1	0.2	64.5	0.6	0.4	3.8	116.4	1.1
Delay (s)	28.6	237.0	30.8	150.4	34.3	22.2	121.9	42.6	39.8	52.0	158.3	34.1
Level of Service	C	F	C	F	C	C	F	D	D	D	F	C
Approach Delay (s)		214.7			55.3			57.5			130.7	
Approach LOS		F			E			E			F	

Intersection Summary

HCM Average Control Delay	134.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	23	7	584	2426	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	23	7	584	2426	7
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)	2					
Upstream signal (m)						179
pX, platoon unblocked	0.37	0.37	0.37			
vC, conflicting volume	2740	1222	2438			
vC1, stage 1 conf vol	2434					
vC2, stage 2 conf vol	306					
vCu, unblocked vol	2299	0	1482			
tC, single (s)	7.2	7.0	4.1			
tC, 2 stage (s)	6.2					
tF (s)	3.7	3.3	2.2			
p0 queue free %	81	94	96			
cM capacity (veh/h)	53	396	170			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	33	7	292	292	1617	816
Volume Left	10	7	0	0	0	0
Volume Right	23	0	0	0	0	7
cSH	133	170	1700	1700	1700	1700
Volume to Capacity	0.25	0.04	0.17	0.17	0.95	0.48
Queue Length 95th (m)	7.0	1.0	0.0	0.0	0.0	0.0
Control Delay (s)	40.8	27.1	0.0	0.0	0.0	0.0
Lane LOS	E	D				
Approach Delay (s)	40.8	0.3	0.0			
Approach LOS	E					

Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization	77.3%		ICU Level of Service	D		
Analysis Period (min)	15					



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	9	60	31	508	2480	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	60	31	508	2480	23
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh				2	2	
Upstream signal (m)				194		
pX, platoon unblocked	0.95					
vC, conflicting volume	2728	843	2508			
vC1, stage 1 conf vol	2496					
vC2, stage 2 conf vol	231					
vCu, unblocked vol	2629	843	2508			
tC, single (s)	6.8	7.0	4.3			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.3			
p0 queue free %	81	80	80			
cM capacity (veh/h)	48	302	154			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	69	31	169	169	169	992	992	519
Volume Left	9	31	0	0	0	0	0	0
Volume Right	60	0	0	0	0	0	0	23
cSH	178	154	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.39	0.20	0.10	0.10	0.10	0.58	0.58	0.31
Queue Length 95th (m)	12.9	5.5	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	37.5	34.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	D						
Approach Delay (s)	37.5	2.0				0.0		
Approach LOS	E							

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	59.3%		ICU Level of Service B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Volume (vph)	110	583	61	124	697	149	101	901	129	232	442	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2		3.0	6.2		3.0	6.2	6.2	3.0	6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1560	3598		1789	3525		1825	1847	1633	1825	1700	
Flt Permitted	0.14	1.00		0.20	1.00		0.39	1.00	1.00	0.06	1.00	
Satd. Flow (perm)	228	3598		369	3525		740	1847	1633	121	1700	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	583	61	124	697	149	101	901	129	232	442	70
RTOR Reduction (vph)	0	7	0	0	15	0	0	0	47	0	5	0
Lane Group Flow (vph)	110	637	0	124	831	0	101	901	82	232	507	0
Heavy Vehicles (%)	17%	0%	0%	2%	1%	0%	0%	4%	0%	0%	7%	34%
Turn Type	pm+pt		pm+pt		pm+pt		Perm		pm+pt			
Protected Phases	7	4		3	8		5	2			1	6
Permitted Phases	4			8			2			2	6	
Actuated Green, G (s)	31.8	28.8		31.8	28.8		65.8	60.8	60.8	72.4	64.4	
Effective Green, g (s)	31.8	28.8		31.8	28.8		65.8	60.8	60.8	72.4	64.4	
Actuated g/C Ratio	0.27	0.24		0.27	0.24		0.55	0.51	0.51	0.60	0.54	
Clearance Time (s)	3.0	6.2		3.0	6.2		3.0	6.2	6.2	3.0	6.6	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	94	864		133	846		451	936	827	201	912	
v/s Ratio Prot	c0.03	0.18		0.02	0.24		0.01	0.49		c0.09	0.30	
v/s Ratio Perm	c0.28			0.22			0.11		0.05	c0.61		
v/c Ratio	1.17	0.74		0.93	0.98		0.22	0.96	0.10	1.15	0.56	
Uniform Delay, d1	46.0	42.1		44.2	45.3		13.6	28.5	15.4	37.7	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	145.8	5.6		59.0	26.9		0.5	21.6	0.2	111.2	2.4	
Delay (s)	191.7	47.7		103.2	72.2		14.1	50.2	15.6	149.0	20.8	
Level of Service	F	D		F	E		B	D	B	F	C	
Approach Delay (s)		68.7			76.2			43.0			60.8	
Approach LOS		E			E			D			E	

Intersection Summary

HCM Average Control Delay	61.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	107.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑		↖	↑	↖	↖	↖	↖
Volume (vph)	449	1304	276	124	1642	95	385	599	105	170	342	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.4	7.4	3.0	7.4		3.0	7.4	7.4	3.0	7.4	
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3471	4856	1601	1772	4893		1738	1883	1478	1690	1715	
Flt Permitted	0.95	1.00	1.00	0.13	1.00		0.08	1.00	1.00	0.22	1.00	
Satd. Flow (perm)	3471	4856	1601	236	4893		148	1883	1478	391	1715	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	449	1304	276	124	1642	95	385	599	105	170	342	573
RTOR Reduction (vph)	0	0	132	0	5	0	0	0	57	0	50	0
Lane Group Flow (vph)	449	1304	144	124	1732	0	385	599	48	170	865	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	2%	8%	2%	3%	5%	29%	5%	2%	9%	8%	4%	0%
Turn Type	Prot		Perm	pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8			2		2	6		
Actuated Green, G (s)	9.0	35.6	35.6	39.6	31.6		58.6	50.6	50.6	51.6	46.6	
Effective Green, g (s)	9.0	35.6	35.6	39.6	31.6		58.6	50.6	50.6	51.6	46.6	
Actuated g/C Ratio	0.08	0.30	0.30	0.33	0.26		0.49	0.42	0.42	0.43	0.39	
Clearance Time (s)	6.0	7.4	7.4	3.0	7.4		3.0	7.4	7.4	3.0	7.4	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	260	1441	475	180	1288		192	794	623	222	666	
v/s Ratio Prot	c0.13	c0.27		0.05	c0.35		c0.15	0.32		0.03	0.50	
v/s Ratio Perm			0.09	0.18			c0.83		0.03	0.30		
v/c Ratio	1.73	0.90	0.30	0.69	1.34		2.01	0.75	0.08	0.77	1.30	
Uniform Delay, d1	55.5	40.6	32.6	30.9	44.2		33.9	29.4	20.7	30.8	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	342.8	8.9	0.8	13.3	160.3		470.3	6.6	0.2	16.9	145.2	
Delay (s)	398.3	49.4	33.4	44.1	204.5		504.3	36.0	21.0	47.7	181.9	
Level of Service	F	D	C	D	F		F	D	C	D	F	
Approach Delay (s)		124.5			193.9			200.1			160.9	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	165.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	141.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕	↗	↖	↕↕	
Volume (vph)	15	15	15	101	20	25	25	1045	19	7	647	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00			0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00			1.00			1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00	1.00	1.00	1.00	
Frt		0.95			0.98			1.00	0.85	1.00	0.99	
Flt Protected		0.98			0.97			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1797			1770			3542	1597	1824	3525	
Flt Permitted		0.87			0.77			0.93	1.00	0.22	1.00	
Satd. Flow (perm)		1584			1401			3295	1597	426	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	101	20	25	25	1045	19	7	647	25
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	5	0	2	0
Lane Group Flow (vph)	0	33	0	0	137	0	0	1070	14	7	670	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	13%	0%	3%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		14.4			14.4			35.9	35.9	35.9	35.9	
Effective Green, g (s)		14.4			14.4			35.9	35.9	35.9	35.9	
Actuated g/C Ratio		0.23			0.23			0.56	0.56	0.56	0.56	
Clearance Time (s)		6.9			6.9			6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0			5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		358			316			1854	899	240	1984	
v/s Ratio Prot												0.19
v/s Ratio Perm		0.02			c0.10			c0.32	0.01	0.02		
v/c Ratio		0.09			0.43			0.58	0.02	0.03	0.34	
Uniform Delay, d1		19.5			21.2			9.0	6.2	6.2	7.5	
Progression Factor		1.00			1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			2.0			0.7	0.0	0.1	0.2	
Delay (s)		19.8			23.2			9.7	6.2	6.3	7.7	
Level of Service		B			C			A	A	A	A	
Approach Delay (s)		19.8			23.2			9.7			7.7	
Approach LOS		B			C			A			A	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕↔		↔↔	↕↕↔		↔	↕↕	↔	↔	↕↕	↔
Volume (vph)	352	2016	197	217	2156	90	465	809	277	234	315	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7		5.0	7.7		3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91		0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frft	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	5112		3404	5160		1822	3510	1572	1824	3444	1579
Flt Permitted	0.95	1.00		0.95	1.00		0.52	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	3471	5112		3404	5160		997	3510	1572	322	3444	1579
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	352	2016	197	217	2156	90	465	809	277	234	315	355
RTOR Reduction (vph)	0	9	0	0	4	0	0	0	131	0	0	8
Lane Group Flow (vph)	352	2204	0	217	2242	0	465	809	146	234	315	347
Confl. Peds. (#/hr)	5		11	11		5	5		14	14		5
Heavy Vehicles (%)	2%	1%	1%	4%	1%	0%	0%	4%	1%	0%	6%	2%
Turn Type	Prot			Prot			pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases							2		2	6		6
Actuated Green, G (s)	10.0	44.3		10.0	44.3		44.0	36.0	36.0	42.0	35.0	45.0
Effective Green, g (s)	10.0	44.3		10.0	44.3		44.0	36.0	36.0	42.0	35.0	45.0
Actuated g/C Ratio	0.08	0.37		0.08	0.37		0.37	0.30	0.30	0.35	0.29	0.38
Clearance Time (s)	5.0	7.7		5.0	7.7		3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	289	1887		284	1905		421	1053	472	200	1005	592
v/s Ratio Prot	c0.10	0.43		0.06	c0.43		c0.07	0.23		0.07	0.09	0.05
v/s Ratio Perm							0.33		0.09	c0.34		0.17
v/c Ratio	1.22	1.17		0.76	1.18		1.10	0.77	0.31	1.17	0.31	0.59
Uniform Delay, d1	55.0	37.9		53.8	37.9		36.6	38.2	32.4	35.5	33.1	30.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	125.3	81.6		13.5	85.5		75.3	5.4	1.7	117.0	0.8	2.3
Delay (s)	180.3	119.5		67.3	123.4		111.9	43.6	34.1	152.5	33.9	32.3
Level of Service	F	F		E	F		F	D	C	F	C	C
Approach Delay (s)		127.8			118.4			62.4			64.0	
Approach LOS		F			F			E			E	

Intersection Summary

HCM Average Control Delay	103.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	125.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	164	57	1088	165	80	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frbp, ped/bikes	1.00	0.97	1.00	0.91	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1615	1366	3411	1366	1466	3318
Flt Permitted	0.95	1.00	1.00	1.00	0.22	1.00
Satd. Flow (perm)	1615	1366	3411	1366	341	3318
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	164	57	1088	165	80	731
RTOR Reduction (vph)	0	45	0	31	0	0
Lane Group Flow (vph)	164	12	1088	134	80	731
Confl. Peds. (#/hr)	4	23		27	27	
Heavy Vehicles (%)	13%	16%	7%	9%	23%	10%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	15.3	15.3	42.2	42.2	41.2	41.2
Effective Green, g (s)	15.3	15.3	42.2	42.2	41.2	41.2
Actuated g/C Ratio	0.21	0.21	0.59	0.59	0.57	0.57
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	343	290	1999	801	195	1899
v/s Ratio Prot	c0.10		c0.32			0.22
v/s Ratio Perm		0.01		0.10	0.23	
v/c Ratio	0.48	0.04	0.54	0.17	0.41	0.38
Uniform Delay, d1	24.9	22.5	9.1	6.8	8.6	8.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.1	0.5	0.2	2.9	0.3
Delay (s)	27.0	22.6	9.6	7.0	11.5	8.7
Level of Service	C	C	A	A	B	A
Approach Delay (s)	25.9		9.3			9.0
Approach LOS	C		A			A

Intersection Summary

HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	72.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	10	10	25	5	14	58	1508	72	13	681	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1746		1784	1709		1789	3579	1633	1825	3544	1633
Flt Permitted	0.75	1.00		0.74	1.00		0.39	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	1431	1746		1398	1709		740	3579	1633	294	3544	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	10	10	25	5	14	58	1508	72	13	681	23
RTOR Reduction (vph)	0	9	0	0	13	0	0	0	5	0	0	4
Lane Group Flow (vph)	15	11	0	25	6	0	58	1508	67	13	681	19
Confl. Peds. (#/hr)			15	15								
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	2%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.0	6.0		6.0	6.0		82.5	82.5	82.5	82.5	82.5	82.5
Effective Green, g (s)	6.0	6.0		6.0	6.0		82.5	82.5	82.5	82.5	82.5	82.5
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.81	0.81	0.81	0.81	0.81	0.81
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	84	103		82	101		599	2895	1321	238	2866	1321
v/s Ratio Prot		0.01			0.00			c0.42				0.19
v/s Ratio Perm	0.01			c0.02			0.08		0.04	0.04		0.01
v/c Ratio	0.18	0.10		0.30	0.06		0.10	0.52	0.05	0.05	0.24	0.01
Uniform Delay, d1	45.7	45.5		46.0	45.3		2.0	3.2	1.9	2.0	2.3	1.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.9		4.4	0.5		0.3	0.7	0.1	0.4	0.2	0.0
Delay (s)	47.8	46.4		50.4	45.8		2.3	3.9	2.0	2.4	2.5	1.9
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		47.0			48.4			3.8			2.5	
Approach LOS		D			D			A			A	

Intersection Summary

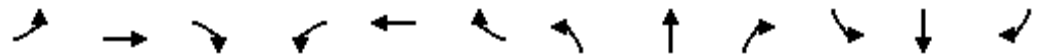
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	274	116	158	316	65	179	1555	138	62	605	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1786	3463		1789	3454		1807	3579	1633	1789	3510	1633
Flt Permitted	0.48	1.00		0.40	1.00		0.38	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	910	3463		745	3454		715	3579	1633	178	3510	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	77	274	116	158	316	65	179	1555	138	62	605	31
RTOR Reduction (vph)	0	43	0	0	16	0	0	0	36	0	0	14
Lane Group Flow (vph)	77	347	0	158	365	0	179	1555	102	62	605	17
Confl. Peds. (#/hr)	44					44						
Heavy Vehicles (%)	1%	1%	0%	2%	2%	2%	1%	2%	0%	2%	4%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.8	19.3		27.8	20.8		63.5	63.5	63.5	58.5	58.5	58.5
Effective Green, g (s)	24.8	19.3		27.8	20.8		63.5	63.5	63.5	58.5	58.5	58.5
Actuated g/C Ratio	0.23	0.18		0.26	0.19		0.59	0.59	0.59	0.55	0.55	0.55
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	255	623		261	670		444	2120	967	97	1915	891
v/s Ratio Prot	0.02	0.10		c0.04	0.11		0.01	c0.43			0.17	
v/s Ratio Perm	0.05			c0.12			0.23		0.06	0.35		0.01
v/c Ratio	0.30	0.56		0.61	0.54		0.40	0.73	0.11	0.64	0.32	0.02
Uniform Delay, d1	33.1	40.0		32.8	38.9		12.8	15.8	9.5	17.0	13.4	11.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.8		5.7	1.6		1.3	2.3	0.2	28.0	0.4	0.0
Delay (s)	34.5	41.9		38.6	40.5		14.1	18.0	9.7	45.0	13.8	11.2
Level of Service	C	D		D	D		B	B	A	D	B	B
Approach Delay (s)		40.7			39.9			17.0			16.5	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	107.2	Sum of lost time (s)	12.6
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Volume (vph)	387	1562	138	205	2002	382	148	1186	130	276	492	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	4948	1517	3404	5092	1580	1807	3510	1580	1722	3476	1526
Fl _t Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.38	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	3437	4948	1517	3404	5092	1580	718	3510	1580	210	3476	1526
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	387	1562	138	205	2002	382	148	1186	130	276	492	122
RTOR Reduction (vph)	0	0	85	0	0	105	0	0	60	0	0	87
Lane Group Flow (vph)	387	1562	53	205	2002	277	148	1186	70	276	492	35
Confl. Peds. (#/hr)	1		3	3		1			1	1		
Heavy Vehicles (%)	3%	6%	6%	4%	3%	2%	1%	4%	2%	6%	5%	7%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4	8		8
Actuated Green, G (s)	10.0	45.7	45.7	10.0	45.7	45.7	42.6	34.6	34.6	42.6	34.6	34.6
Effective Green, g (s)	10.0	45.7	45.7	10.0	45.7	45.7	42.6	34.6	34.6	42.6	34.6	34.6
Actuated g/C Ratio	0.08	0.38	0.38	0.08	0.38	0.38	0.36	0.29	0.29	0.36	0.29	0.29
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	286	1884	578	284	1939	602	327	1012	456	175	1002	440
v/s Ratio Prot	c0.11	0.32		0.06	c0.39		0.03	0.34		c0.10	0.14	
v/s Ratio Perm			0.03			0.18	0.13		0.04	c0.45		0.02
v/c Ratio	1.35	0.83	0.09	0.72	1.03	0.46	0.45	1.17	0.15	1.58	0.49	0.08
Uniform Delay, d ₁	55.0	33.6	23.8	53.6	37.1	27.9	27.4	42.7	31.8	34.0	35.4	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	180.2	4.4	0.3	10.6	29.3	2.5	2.1	88.0	0.3	285.3	0.8	0.2
Delay (s)	235.2	38.0	24.1	64.3	66.5	30.4	29.5	130.7	32.1	319.3	36.2	31.3
Level of Service	F	D	C	E	E	C	C	F	C	F	D	C
Approach Delay (s)		73.6			61.0			111.7			123.3	
Approach LOS		E			E			F			F	

Intersection Summary

HCM Average Control Delay	83.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	116.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Volume (veh/h)	14	13	38	41	15	26	63	1511	72	19	843	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	14	13	38	41	15	26	63	1511	72	19	843	24
Pedestrians					1			1				
Lane Width (m)					3.7			3.7				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								394			374	
pX, platoon unblocked	0.68	0.68	0.91	0.68	0.68	0.63	0.91			0.63		
vC, conflicting volume	1796	2591	422	2179	2579	792	867			1584		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	647	1823	180	1214	1805	0	667			764		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			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 %	91	72	95	37	69	96	92			97		
cM capacity (veh/h)	164	47	765	65	48	690	822			543		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	65	82	818	828	300	562	24
Volume Left	14	41	63	0	19	0	0
Volume Right	38	26	0	72	0	0	24
cSH	158	84	822	1700	543	1700	1700
Volume to Capacity	0.41	0.98	0.08	0.49	0.03	0.33	0.01
Queue Length 95th (m)	13.8	41.4	1.9	0.0	0.8	0.0	0.0
Control Delay (s)	42.9	181.8	2.0	0.0	1.2	0.0	0.0
Lane LOS	E	F	A		A		
Approach Delay (s)	42.9	181.8	1.0		0.4		
Approach LOS	E	F					

Intersection Summary			
Average Delay		7.4	
Intersection Capacity Utilization	89.3%		ICU Level of Service E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗	↖	↖	↖↗	↖↗
Volume (vph)	119	261	73	116	378	95	138	1458	188	144	735	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1772	3342		1791	3505		1825	3579	1633	1789	3471	
Flt Permitted	0.38	1.00		0.51	1.00		0.35	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	709	3342		955	3505		669	3579	1633	129	3471	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	119	261	73	116	378	95	138	1458	188	144	735	68
RTOR Reduction (vph)	0	21	0	0	19	0	0	0	27	0	6	0
Lane Group Flow (vph)	119	313	0	116	454	0	138	1458	161	144	797	0
Confl. Peds. (#/hr)			14	14								
Heavy Vehicles (%)	3%	0%	23%	1%	1%	1%	0%	2%	0%	2%	4%	2%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	34.5	34.5		34.5	34.5		61.5	61.5	61.5	72.8	72.8	
Effective Green, g (s)	34.5	34.5		34.5	34.5		61.5	61.5	61.5	72.8	72.8	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.51	0.51	0.51	0.61	0.61	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	204	961		275	1008		343	1834	837	175	2106	
v/s Ratio Prot		0.09			0.13			0.41		c0.05	0.23	
v/s Ratio Perm	c0.17			0.12			0.21		0.10	c0.45		
v/c Ratio	0.58	0.33		0.42	0.45		0.40	0.79	0.19	0.82	0.38	
Uniform Delay, d1	36.6	33.6		34.7	35.0		18.0	24.1	15.8	25.1	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.6	0.9		4.7	1.5		3.5	3.7	0.5	28.3	0.2	
Delay (s)	48.2	34.5		39.4	36.5		21.5	27.7	16.3	53.4	12.3	
Level of Service	D	C		D	D		C	C	B	D	B	
Approach Delay (s)		38.1			37.0			26.0			18.5	
Approach LOS		D			D			C			B	

Intersection Summary

HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	102.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	227	707	173	204	1316	177	264	1612	126	148	660	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1825	3504		1772	3550		1789	3568		1825	3579	1609
Flt Permitted	0.11	1.00		0.11	1.00		0.21	1.00		0.12	1.00	1.00
Satd. Flow (perm)	208	3504		213	3550		401	3568		224	3579	1609
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	227	707	173	204	1316	177	264	1612	126	148	660	120
RTOR Reduction (vph)	0	18	0	0	9	0	0	5	0	0	0	37
Lane Group Flow (vph)	227	862	0	204	1484	0	264	1733	0	148	660	83
Confl. Peds. (#/hr)			2	2			2		4	4		2
Heavy Vehicles (%)	0%	1%	0%	3%	1%	1%	2%	1%	2%	0%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	46.9	36.9		54.0	41.0		54.0	45.0		40.3	34.3	34.3
Effective Green, g (s)	46.9	36.9		54.0	41.0		54.0	45.0		40.3	34.3	34.3
Actuated g/C Ratio	0.39	0.31		0.45	0.34		0.45	0.38		0.34	0.29	0.29
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lane Grp Cap (vph)	216	1077		279	1213		374	1338		155	1023	460
v/s Ratio Prot	c0.09	0.25		c0.09	c0.42		0.10	c0.49		c0.05	0.18	
v/s Ratio Perm	0.32			0.24			0.22			0.27		0.05
v/c Ratio	1.05	0.80		0.73	1.22		0.71	1.30		0.95	0.65	0.18
Uniform Delay, d1	31.3	38.2		24.7	39.5		23.3	37.5		36.1	37.5	32.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	75.3	5.0		11.4	108.2		7.4	138.5		59.4	3.1	0.9
Delay (s)	106.5	43.1		36.1	147.7		30.7	176.0		95.6	40.7	33.1
Level of Service	F	D		D	F		C	F		F	D	C
Approach Delay (s)		56.1			134.3			156.8			48.4	
Approach LOS		E			F			F			D	

Intersection Summary

HCM Average Control Delay	113.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	128.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕	↗	↗	↕	↗
Volume (vph)	18	20	62	59	17	37	132	1700	115	15	848	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes		0.99			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.92			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1660			1737		1824	3614	1559	1825	3579	1590
Flt Permitted		0.93			0.79		0.28	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)		1560			1405		532	3614	1559	152	3579	1590
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	20	62	59	17	37	132	1700	115	15	848	50
RTOR Reduction (vph)	0	49	0	0	14	0	0	0	15	0	0	14
Lane Group Flow (vph)	0	51	0	0	99	0	132	1700	100	15	848	36
Confl. Peds. (#/hr)	18		5	5		18	2		2	2		2
Heavy Vehicles (%)	11%	0%	2%	2%	0%	0%	0%	1%	2%	0%	2%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		24.0			24.0		84.0	78.0	78.0	77.8		75.4
Effective Green, g (s)		24.0			24.0		84.0	78.0	78.0	77.8		75.4
Actuated g/C Ratio		0.20			0.20		0.69	0.64	0.64	0.64		0.62
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		306			275		428	2303	993	129		2205
v/s Ratio Prot							c0.02	c0.47		0.00		0.24
v/s Ratio Perm		0.03			c0.07		0.20		0.06	0.07		0.02
v/c Ratio		0.17			0.36		0.31	0.74	0.10	0.12		0.38
Uniform Delay, d1		40.9			42.5		7.4	15.2	8.6	13.0		11.8
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.2			3.6		0.9	2.2	0.2	0.8		0.5
Delay (s)		42.1			46.2		8.2	17.4	8.8	13.8		12.3
Level of Service		D			D		A	B	A	B		B
Approach Delay (s)		42.1			46.2			16.2				12.2
Approach LOS		D			D			B				B

Intersection Summary

HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	122.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	50	95	2006	982	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	50	95	2006	982	45
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					349	
pX, platoon unblocked	0.85	0.85	0.85			
vC, conflicting volume	2179	495	1031			
vC1, stage 1 conf vol	986					
vC2, stage 2 conf vol	1193					
vCu, unblocked vol	2035	54	685			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	94	87			
cM capacity (veh/h)	185	840	750			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	71	95	1003	1003	491	491	45
Volume Left	21	95	0	0	0	0	0
Volume Right	50	0	0	0	0	0	45
cSH	411	750	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.13	0.59	0.59	0.29	0.29	0.03
Queue Length 95th (m)	4.7	3.3	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	15.6	10.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B					
Approach Delay (s)	15.6	0.5			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	66.4%		ICU Level of Service C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	180	97	173	299	144	181	1949	158	82	896	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1742	3228		1748	3267		1787	3536		1738	3481	
Flt Permitted	0.39	1.00		0.56	1.00		0.29	1.00		0.06	1.00	
Satd. Flow (perm)	715	3228		1034	3267		549	3536		102	3481	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	56	180	97	173	299	144	181	1949	158	82	896	37
RTOR Reduction (vph)	0	59	0	0	49	0	0	5	0	0	3	0
Lane Group Flow (vph)	56	218	0	173	394	0	181	2102	0	82	930	0
Confl. Peds. (#/hr)	13		17	17		13	5		5	5		5
Heavy Vehicles (%)	4%	7%	4%	3%	5%	6%	2%	2%	1%	5%	4%	8%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.2	30.2		30.2	30.2		68.3	68.3		75.9	75.9	
Effective Green, g (s)	30.2	30.2		30.2	30.2		68.3	68.3		75.9	75.9	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.57	0.57		0.64	0.64	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	181	819		262	829		315	2029		119	2220	
v/s Ratio Prot		0.07			0.12			c0.59		c0.02	0.27	
v/s Ratio Perm	0.08			c0.17			0.33			0.42		
v/c Ratio	0.31	0.27		0.66	0.48		0.57	1.04		0.69	0.42	
Uniform Delay, d1	36.0	35.5		39.8	37.7		16.1	25.4		28.5	10.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	0.8		12.4	2.0		7.4	30.0		19.3	0.3	
Delay (s)	40.3	36.3		52.2	39.6		23.5	55.3		47.9	10.9	
Level of Service	D	D		D	D		C	E		D	B	
Approach Delay (s)		37.0			43.2			52.8			13.9	
Approach LOS		D			D			D			B	

Intersection Summary

HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	118.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	344	1710	406	380	2605	214	527	1813	244	188	811	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	176	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	344	1710	406	380	2605	214	527	1813	244	188	811	157
RTOR Reduction (vph)	0	0	139	0	0	119	0	0	127	0	0	129
Lane Group Flow (vph)	344	1710	267	380	2605	95	527	1813	117	188	811	28
Confl. Peds. (#/hr)	5		2	2		5			12	12		
Heavy Vehicles (%)	0%	7%	5%	19%	6%	7%	0%	1%	5%	8%	6%	8%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	54.7	43.7	43.7	11.0	47.7	47.7	15.0	29.3	29.3	7.0	21.3	21.3
Effective Green, g (s)	54.7	43.7	43.7	11.0	47.7	47.7	15.0	29.3	29.3	7.0	21.3	21.3
Actuated g/C Ratio	0.46	0.36	0.36	0.09	0.40	0.40	0.12	0.24	0.24	0.06	0.18	0.18
Clearance Time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	231	1785	558	273	1967	594	443	1268	367	191	878	268
v/s Ratio Prot	c0.14	0.35		0.13	c0.53		c0.15	c0.35		0.06	0.16	
v/s Ratio Perm	c0.54		0.17			0.06			0.08			0.02
v/c Ratio	1.49	0.96	0.48	1.39	1.32	0.16	1.19	1.43	0.32	0.98	0.92	0.10
Uniform Delay, d1	34.3	37.3	29.4	54.5	36.1	23.3	52.5	45.4	37.2	56.4	48.6	41.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	241.7	13.4	2.9	197.3	149.6	0.6	105.9	198.0	1.1	60.5	15.7	0.4
Delay (s)	276.0	50.7	32.3	251.8	185.8	23.8	158.4	243.4	38.2	117.0	64.2	41.7
Level of Service	F	D	C	F	F	C	F	F	D	F	E	D
Approach Delay (s)		79.2			182.8			206.7			69.7	
Approach LOS		E			F			F			E	

Intersection Summary

HCM Average Control Delay	148.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	131.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	7	18	2295	1114	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	3	7	18	2295	1114	9
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					179	
pX, platoon unblocked	0.87	0.87	0.87			
vC, conflicting volume	2307	566	1128			
vC1, stage 1 conf vol	1124					
vC2, stage 2 conf vol	1184					
vCu, unblocked vol	2207	217	859			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	97			
cM capacity (veh/h)	195	691	688			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	10	18	1148	1148	743	380
Volume Left	3	18	0	0	0	0
Volume Right	7	0	0	0	0	9
cSH	392	688	1700	1700	1700	1700
Volume to Capacity	0.03	0.03	0.68	0.68	0.44	0.22
Queue Length 95th (m)	0.6	0.6	0.0	0.0	0.0	0.0
Control Delay (s)	14.4	10.4	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	14.4	0.1			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			73.4%		ICU Level of Service	D
Analysis Period (min)			15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	55	108	2263	1089	42
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	55	108	2263	1089	42
Pedestrians	2			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh				2	2	
Upstream signal (m)				194		
pX, platoon unblocked	0.76					
vC, conflicting volume	2082	388	1133			
vC1, stage 1 conf vol	1112					
vC2, stage 2 conf vol	970					
vCu, unblocked vol	1339	388	1133			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	91	82			
cM capacity (veh/h)	259	608	617			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	74	108	754	754	754	436	436	260
Volume Left	19	108	0	0	0	0	0	0
Volume Right	55	0	0	0	0	0	0	42
cSH	452	617	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.18	0.44	0.44	0.44	0.26	0.26	0.15
Queue Length 95th (m)	4.4	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	14.5	12.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	14.5	0.5				0.0		
Approach LOS	B							

Intersection Summary

Average Delay	0.7
Intersection Capacity Utilization	55.6%
ICU Level of Service	B
Analysis Period (min)	15

Appendix F

Left Turn Lane Warrant Analysis

Dixie Road/ Northcliffe Street Intersection

Dove Road / Northcliff Street Intersection

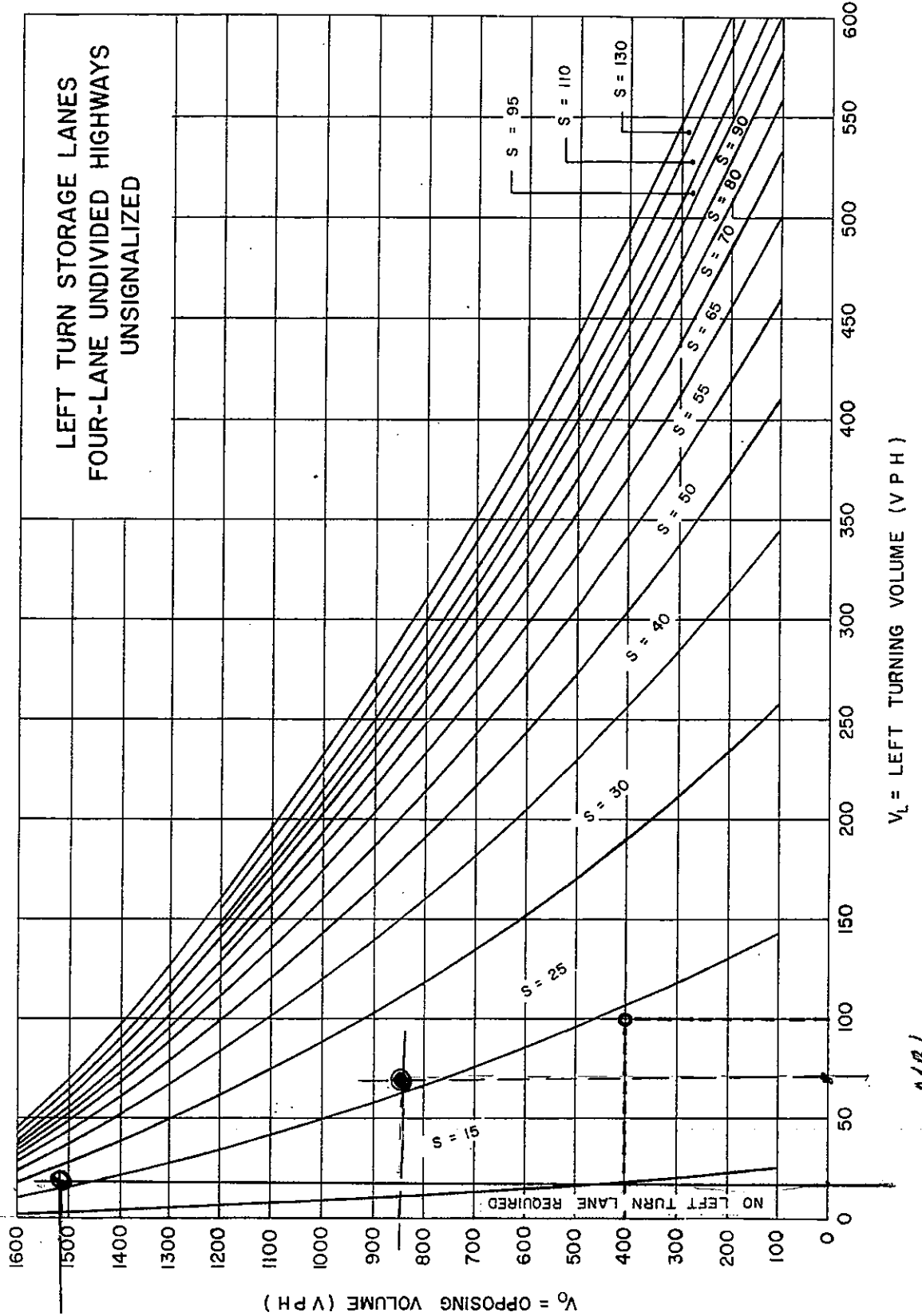


Figure EB-1

Appendix G

2021 Future Conditions –
Traffic Signal Warrant Analysis

Dixie Road at Northcliff Street Intersection

Results Sheet[Input Sheet](#)[Analysis Sheet](#)[Proposed Collision](#)[GO TO Justification:](#)

Intersection: Dixie Road/ Moregate/ Northcliff Street

Count Date: 2021 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	77	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	79	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	77	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	79	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		75	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Input Data Sheet

Analysis Sheet

Results Sheet

Proposed Collision

GO TO Justification:

What are the intersecting roadways?

Dixie Road/ Moregate-Northcliff Street

What is the direction of the Main Road street?

North-South

When was the data collected?

2021 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

4

d.- What is the operating environment?

Urban

Population >= 10,000

AND

Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	17	517	28	24	1	102	16	1,358	23	85	0	31	
9:00	30	636	20	31	0	107	20	1,417	24	86	6	27	
12:00	38	537	25	20	0	49	25	687	25	25	3	18	
13:00	25	646	18	8	1	24	23	598	28	31	4	16	
14:00	32	768	28	16	1	27	28	664	16	24	4	13	
16:00	42	1,167	38	23	4	35	21	783	37	24	7	24	
17:00	63	1,509	75	20	1	41	23	795	30	49	3	38	
18:00	82	1,764	78	18	1	49	25	860	24	44	1	35	
Total	329	7,544	310	160	9	434	181	7,162	207	368	28	202	0

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Moregate Northcliff Street

Count Date: 2021 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
1A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	2,202	2,404	1,452	1,422	1,621	2,205	2,647	2,981				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
1B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	120	170	120	170	243	257	115	84	85	117	152	148				
COMPLIANCE %					100	100	68	49	50	69	89	87	612	77		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
2A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	1,959	2,147	1,337	1,338	1,536	2,088	2,495	2,833				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
2B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	50	75	50	75	110	123	48	43	44	54	72	63				
COMPLIANCE %					100	100	64	57	59	72	96	84	632	79		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	NOT JUSTIFIED	

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main) X	Heaviest Minor Approach Y (actual)	Required Value Y (warrant threshold)	Average % Compliance	Overall % Compliance
Justification 4	9:00	2,147	138	115	100 %	75 %
	16:00	2,088	62	115	54 %	
	17:00	2,495	90	115	78 %	
	18:00	2,833	80	115	70 %	

Dixie Road at Lascelles Boulevard Intersection

Results Sheet**Input Sheet****Analysis Sheet****Proposed Collision**

GO TO Justification:

Intersection: Dixie Road/ Lascelles Blvd

Count Date: 2021 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	37	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	41	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	37	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	41	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		75	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
1A	480	720	600	900	2,681	2,771	1,352	1,441	1,362	2,897	2,686	2,819				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
1B	180	255	180	255	210	129	66	62	51	74	71	83				
	COMPLIANCE %				82	51	26	24	20	29	28	33	293	37		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fullfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
2A	480	720	600	900	2,471	2,642	1,286	1,379	1,311	2,623	2,615	2,736				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
2B	50	75	50	75	51	64	25	23	16	20	25	22				
	COMPLIANCE %				68	85	33	31	21	27	33	29	328	41		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fullfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	NOT JUSTIFIED	

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	2,642	129	115	100 %	75 %
	16:00	2,623	74	115	64 %	
	17:00	2,615	71	115	62 %	
	18:00	2,736	83	115	72 %	

Input Data Sheet

Analysis Sheet

Results Sheet

Proposed Collision

GO TO Justification:

What are the intersecting roadways?

Dixie Road/ Lascelles Blvd

What is the direction of the Main Road/street?

North-South

When was the data collected?

2021 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

3

d.- What is the operating environment?

Urban

Population >= 10,000

AND

Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	13	567		51		159		1,872	19				
9:00	22	593		64		65		1,960	67				
12:00	14	546		25		41		690	36				
13:00	30	629		23		39		678	42				
14:00	36	645		16		35		581	49				
16:00	101	1,630		20		54		830	62				
17:00	100	1,671		25		46		811	33				
18:00	107	1,749		22		61		829	51				
Total	423	8,030	0	246	0	500	0	8,251	359	0	0	0	0

Dixie Road at Hazelwood Road Intersection

Results Sheet**Input Sheet****Analysis Sheet****Proposed Collision**

GO TO Justification

Intersection: Dixie Road/ Hazelwood Dr

Count Date: 2021 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		25	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Hazelwood Dr

Count Date: 2021 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 Lanes		2 or More Lanes		Hour Ending									
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00		
1A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
	480	720	600	900	3,409	3,195	2,024	1,944	2,162	3,227	3,634	3,103		
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100
1B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
	180	255	180	255	31	48	18	7	10	21	13	26		
COMPLIANCE %					12	19	7	3	4	8	5	10	68	9
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
													Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 Lanes		2 or More Lanes		Hour Ending									
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00		
2A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
	480	720	600	900	3,378	3,147	2,006	1,937	2,152	3,206	3,621	3,077		
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100
2B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
	50	75	50	75	10	13	3	4	0	9	4	10		
COMPLIANCE %					13	17	4	5	0	12	5	13	71	9
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
													Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	8:00	3,378	31	115	27 %	25 %
	9:00	3,147	48	115	42 %	
	16:00	3,206	21	115	18 %	
	17:00	3,621	13	115	11 %	

Input Data Sheet **Analysis Sheet** **Results Sheet** **Proposed Collision** **GO TO Justification:**

What are the intersecting roadways?

What is the direction of the Main Road, street? When was the data collected?

Justification 1 - 4: Volume Warrants

- a.- Number of lanes on the Main Road?
- b.- Number of lanes on the Minor Road?
- c.- How many approaches?
- d.- What is the operating environment? Population >= 10,000 AND Speed < 70 km/hr
- e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	4	562		10		21		2,805	7				
9:00	7	566		13		35		2,570	4				
12:00	12	907		3		15		1,078	9				
13:00	6	894		4		3		1,025	12				
14:00	10	1,022		0		10		1,117	3				
16:00	19	1,890		9		12		1,276	21				
17:00	24	2,450		4		9		1,135	12				
18:00	12	1,848		10		16		1,188	29				
Total	94	10,139	0	53	0	121	0	12,194	97	0	0	0	0

Dixie Road at Hillside Drive Intersection

Results Sheet**Input Sheet****Analysis Sheet****Proposed Collision****GO TO Justification:**

Intersection: Dixie Road/ Hillside Street

Count Date: 2021 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	25	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	18	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	25	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	18	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		68	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Hillside Street

Count Date: 2021 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
1A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	2,351	3,182	1,809	1,979	2,028	3,169	3,720	4,050				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
1B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	180	255	180	255	62	110	50	43	45	54	59	90				
COMPLIANCE %					24	43	20	17	18	21	23	35	201	25		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fullfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
2A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	2,289	3,072	1,759	1,936	1,983	3,115	3,661	3,960				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
2B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	50	75	50	75	9	15	16	8	4	15	14	27				
COMPLIANCE %					12	20	21	11	5	20	19	36	144	18		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fullfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	NOT JUSTIFIED	

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	3,072	110	115	96 %	68 %
	16:00	3,115	54	115	47 %	
	17:00	3,661	59	115	51 %	
	18:00	3,960	90	115	78 %	

Input Data Sheet

Analysis Sheet

Results Sheet

Proposed Collision

GO TO Justification

What are the intersecting roadways?

Dixie Road/ Hillside Street

What is the direction of the Main Road street?

North-South

When was the data collected?

2021 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

3

d.- What is the operating environment?

Urban

Population >= 10,000

AND

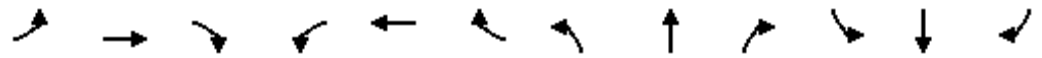
Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	27	614		9		53		1,624	24				
9:00	39	633		15		95		2,354	46				
12:00	34	752		16		34		965	8				
13:00	43	930		8		35		954	9				
14:00	59	940		4		41		976	8				
16:00	70	1,898		15		39		1,112	35				
17:00	101	2,511		14		45		1,010	39				
18:00	120	2,772		27		63		1,022	46				
Total	493	11,050	0	108	0	405	0	10,017	215	0	0	0	0

Appendix H

2021 Future Conditions –
(With Dixie Road Improvements)
Intersection Capacity Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↘
Volume (vph)	3	131	42	283	132	17	83	957	295	37	1464	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.6	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1825	3202	1633	1560	3579	1633	1547	4334	1219	1825	4466	
Flt Permitted	0.67	1.00	1.00	0.57	1.00	1.00	0.09	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	1284	3202	1633	944	3579	1633	151	4334	1219	499	4466	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	131	42	283	132	17	83	957	295	37	1464	25
RTOR Reduction (vph)	0	0	36	0	0	12	0	0	120	0	2	0
Lane Group Flow (vph)	3	131	6	283	132	5	83	957	175	37	1487	0
Heavy Vehicles (%)	0%	14%	0%	17%	2%	0%	18%	21%	34%	0%	17%	25%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	19.7	18.3	18.3	42.1	37.7	37.7	65.0	57.9	57.9	58.0	53.9	
Effective Green, g (s)	19.7	18.3	18.3	42.1	37.7	37.7	65.0	57.9	57.9	58.0	53.9	
Actuated g/C Ratio	0.16	0.15	0.15	0.35	0.32	0.32	0.54	0.48	0.48	0.49	0.45	
Clearance Time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.6	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	218	490	250	440	1129	515	172	2100	591	288	2014	
v/s Ratio Prot	0.00	0.04		c0.11	0.04		c0.03	0.22		0.00	c0.33	
v/s Ratio Perm	0.00		0.00	c0.11		0.00	0.23		0.14	0.06		
v/c Ratio	0.01	0.27	0.03	0.64	0.12	0.01	0.48	0.46	0.30	0.13	0.74	
Uniform Delay, d1	41.7	44.7	43.0	30.7	29.1	28.1	16.9	20.4	18.5	16.3	27.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.3	0.2	4.4	0.2	0.0	4.4	0.7	1.3	0.4	2.5	
Delay (s)	41.8	46.0	43.2	35.0	29.3	28.1	21.3	21.1	19.8	16.7	29.5	
Level of Service	D	D	D	D	C	C	C	C	B	B	C	
Approach Delay (s)		45.3			33.0			20.8			29.2	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	12.6
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Volume (vph)	502	1162	165	286	821	70	86	647	164	111	1030	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3052	4902	1570	1615	4641	1361	1659	3544	1398	1754	3544	1498
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.14	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	3052	4902	1570	1615	4641	1361	244	3544	1398	554	3544	1498
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	502	1162	165	286	821	70	86	647	164	111	1030	255
RTOR Reduction (vph)	0	0	79	0	0	34	0	0	103	0	0	70
Lane Group Flow (vph)	502	1162	86	286	821	36	86	647	61	111	1030	185
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	16%	7%	4%	13%	13%	20%	10%	3%	15%	4%	3%	9%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	20.6	29.0	29.0	20.6	26.0	26.0	47.6	44.6	44.6	51.6	46.6	46.6
Effective Green, g (s)	20.6	29.0	29.0	20.6	26.0	26.0	47.6	44.6	44.6	51.6	46.6	46.6
Actuated g/C Ratio	0.17	0.24	0.24	0.17	0.22	0.22	0.40	0.37	0.37	0.43	0.39	0.39
Clearance Time (s)	6.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	524	1185	379	277	1006	295	132	1317	520	288	1376	582
v/s Ratio Prot	0.16	c0.24		c0.18	0.18		c0.02	0.18		c0.02	c0.29	
v/s Ratio Perm			0.05			0.03	0.24		0.04	0.15		0.12
v/c Ratio	0.96	0.98	0.23	1.03	0.82	0.12	0.65	0.49	0.12	0.39	0.75	0.32
Uniform Delay, d1	49.3	45.2	36.5	49.7	44.7	37.8	29.7	29.0	24.8	21.5	31.6	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.2	21.6	0.6	62.7	5.9	0.4	14.5	1.3	0.5	1.8	3.8	1.4
Delay (s)	78.5	66.9	37.2	112.4	50.6	38.2	44.2	30.3	25.2	23.3	35.4	27.1
Level of Service	E	E	D	F	D	D	D	C	C	C	D	C
Approach Delay (s)		67.4			64.9			30.7			32.9	
Approach LOS		E			E			C			C	

Intersection Summary

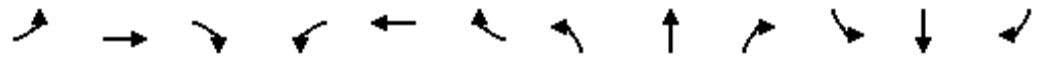
HCM Average Control Delay	51.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↖	↗	↑↑↑	↖
Volume (vph)	15	15	15	250	20	13	25	1276	364	85	1649	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes		1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.95			0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1796			1755		1825	4948	1477	1721	4939	
Flt Permitted		0.86			0.72		0.10	1.00	1.00	0.18	1.00	
Satd. Flow (perm)		1570			1317		193	4948	1477	321	4939	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	250	20	13	25	1276	364	85	1649	25
RTOR Reduction (vph)	0	11	0	0	1	0	0	0	138	0	1	0
Lane Group Flow (vph)	0	34	0	0	282	0	25	1276	226	85	1673	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	4%	0%	10%	0%	6%	8%	6%	6%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		28.7			28.7		59.6	59.6	59.6	59.6	59.6	
Effective Green, g (s)		28.7			28.7		59.6	59.6	59.6	59.6	59.6	
Actuated g/C Ratio		0.28			0.28		0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		443			371		113	2897	865	188	2892	
v/s Ratio Prot								0.26				c0.34
v/s Ratio Perm		0.02			c0.21		0.13		0.15	0.26		
v/c Ratio		0.08			0.76		0.22	0.44	0.26	0.45	0.58	
Uniform Delay, d1		26.8			33.4		10.0	11.8	10.3	11.9	13.2	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			10.2		2.1	0.2	0.3	3.6	0.5	
Delay (s)		27.0			43.6		12.1	12.0	10.7	15.5	13.7	
Level of Service		C			D		B	B	B	B	B	
Approach Delay (s)		27.0			43.6			11.7			13.8	
Approach LOS		C			D			B			B	

Intersection Summary

HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔	↑↑↑	↔	↔	↑↑↑	↔
Volume (vph)	386	2047	469	336	1659	213	163	1027	138	160	1249	571
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.91	1.00	1.00	0.94	1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	5142	1478	3340	5092	1512	1674	4948	1379	1788	4948	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	3437	5142	1478	3340	5092	1512	227	4948	1379	243	4948	1537
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	386	2047	469	336	1659	213	163	1027	138	160	1249	571
RTOR Reduction (vph)	0	0	93	0	0	52	0	0	98	0	0	11
Lane Group Flow (vph)	386	2047	376	336	1659	161	163	1027	40	160	1249	560
Confl. Peds. (#/hr)	45		63	63		45	28		50	50		28
Heavy Vehicles (%)	3%	2%	1%	6%	3%	1%	9%	6%	10%	2%	6%	3%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	15.0	48.3	48.3	11.0	44.3	44.3	38.0	31.0	31.0	38.0	31.0	46.0
Effective Green, g (s)	15.0	48.3	48.3	11.0	44.3	44.3	38.0	31.0	31.0	38.0	31.0	46.0
Actuated g/C Ratio	0.12	0.40	0.40	0.09	0.37	0.37	0.32	0.26	0.26	0.32	0.26	0.38
Clearance Time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	430	2070	595	306	1880	558	156	1278	356	167	1278	589
v/s Ratio Prot	0.11	c0.40		0.10	0.33		c0.06	0.21		0.06	0.25	c0.12
v/s Ratio Perm			0.25			0.11	c0.27		0.03	0.25		0.25
v/c Ratio	0.90	0.99	0.63	1.10	0.88	0.29	1.04	0.80	0.11	0.96	0.98	0.95
Uniform Delay, d1	51.7	35.6	28.7	54.5	35.4	26.7	37.0	41.7	34.0	34.7	44.2	35.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.1	17.3	5.1	80.3	6.4	1.3	84.4	5.4	0.6	57.7	20.3	25.8
Delay (s)	73.8	52.9	33.8	134.8	41.8	28.0	121.4	47.1	34.6	92.4	64.5	61.7
Level of Service	E	D	C	F	D	C	F	D	C	F	E	E
Approach Delay (s)		52.6			54.6			54.9			65.9	
Approach LOS		D			D			D			E	

Intersection Summary

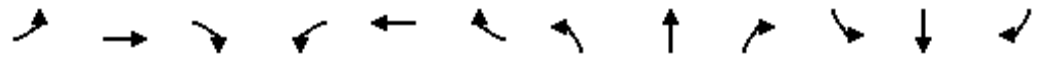
HCM Average Control Delay	56.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	102.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵	↑↑↑	↵	↵	↑↑↑
Volume (vph)	172	75	1577	51	63	1819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frbp, ped/bikes	1.00	1.00	1.00	0.77	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.98	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1807	1633	5142	1237	1708	5092
Flt Permitted	0.95	1.00	1.00	1.00	0.13	1.00
Satd. Flow (perm)	1807	1633	5142	1237	238	5092
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	172	75	1577	51	63	1819
RTOR Reduction (vph)	0	17	0	7	0	0
Lane Group Flow (vph)	172	58	1577	44	63	1819
Confl. Peds. (#/hr)	1			61	61	
Heavy Vehicles (%)	1%	0%	2%	2%	5%	3%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	16.6	16.6	65.9	65.9	64.9	64.9
Effective Green, g (s)	16.6	16.6	65.9	65.9	64.9	64.9
Actuated g/C Ratio	0.17	0.17	0.68	0.68	0.67	0.67
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	309	279	3493	840	159	3407
v/s Ratio Prot	c0.10		0.31			c0.36
v/s Ratio Perm		0.04		0.04	0.26	
v/c Ratio	0.56	0.21	0.45	0.05	0.40	0.53
Uniform Delay, d1	36.8	34.5	7.2	5.2	7.2	8.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.8	0.2	0.1	3.4	0.3
Delay (s)	40.5	35.3	7.4	5.2	10.6	8.6
Level of Service	D	D	A	A	B	A
Approach Delay (s)	38.9		7.3			8.6
Approach LOS	D		A			A

Intersection Summary

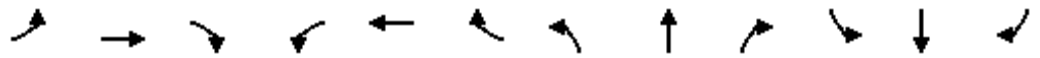
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Volume (vph)	15	15	15	29	1	14	6	1292	21	5	2001	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1748		1641	1652		1825	4948	1458	1825	5092	1432
Flt Permitted	0.75	1.00		0.74	1.00		0.09	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	1436	1748		1274	1652		166	4948	1458	384	5092	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	29	1	14	6	1292	21	5	2001	12
RTOR Reduction (vph)	0	14	0	0	13	0	0	0	3	0	0	1
Lane Group Flow (vph)	15	16	0	29	2	0	6	1292	18	5	2001	11
Confl. Peds. (#/hr)			13	13								
Heavy Vehicles (%)	0%	0%	0%	9%	0%	0%	0%	6%	12%	0%	3%	14%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.5	6.5		6.5	6.5		87.4	87.4	87.4	87.4	87.4	87.4
Effective Green, g (s)	6.5	6.5		6.5	6.5		87.4	87.4	87.4	87.4	87.4	87.4
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.81	0.81	0.81	0.81	0.81	0.81
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	87	106		77	100		135	4027	1186	312	4144	1165
v/s Ratio Prot		0.01			0.00			0.26				c0.39
v/s Ratio Perm	0.01			c0.02			0.04		0.01	0.01		0.01
v/c Ratio	0.17	0.15		0.38	0.02		0.04	0.32	0.02	0.02	0.48	0.01
Uniform Delay, d1	47.9	47.8		48.5	47.4		1.9	2.5	1.9	1.9	3.1	1.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	1.4		6.4	0.2		0.6	0.2	0.0	0.1	0.4	0.0
Delay (s)	49.9	49.2		54.9	47.6		2.6	2.7	1.9	2.0	3.5	1.9
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		49.4			52.4			2.7			3.5	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	107.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Volume (vph)	97	144	149	305	283	104	60	1045	22	121	1834	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.92		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1788	3258		1789	3258		1644	4902	1633	1755	5092	1432
Flt Permitted	0.52	1.00		0.47	1.00		0.07	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	977	3258		877	3258		118	4902	1633	484	5092	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	144	149	305	283	104	60	1045	22	121	1834	40
RTOR Reduction (vph)	0	66	0	0	36	0	0	0	9	0	0	12
Lane Group Flow (vph)	97	227	0	305	351	0	60	1045	13	121	1834	28
Confl. Peds. (#/hr)	38					38						
Heavy Vehicles (%)	1%	5%	2%	2%	8%	1%	11%	7%	0%	4%	3%	14%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	22.7	15.7		28.7	18.7		61.1	61.1	61.1	55.7	55.7	55.7
Effective Green, g (s)	22.7	15.7		28.7	18.7		61.1	61.1	61.1	55.7	55.7	55.7
Actuated g/C Ratio	0.22	0.15		0.28	0.18		0.59	0.59	0.59	0.53	0.53	0.53
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	267	491		329	585		104	2874	958	259	2722	765
v/s Ratio Prot	0.02	0.07		c0.09	0.11		c0.01	0.21			c0.36	
v/s Ratio Perm	0.05			c0.17			0.32		0.01	0.25		0.02
v/c Ratio	0.36	0.46		0.93	0.60		0.58	0.36	0.01	0.47	0.67	0.04
Uniform Delay, d1	33.7	40.4		35.0	39.3		13.6	11.3	9.0	15.0	17.6	11.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	1.4		32.3	2.5		11.8	0.4	0.0	5.9	1.4	0.1
Delay (s)	35.5	41.8		67.2	41.8		25.3	11.7	9.0	21.0	19.0	11.6
Level of Service	D	D		E	D		C	B	A	C	B	B
Approach Delay (s)		40.2			53.0			12.4			19.0	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	12.6
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖	↑↑↑	↖
Volume (vph)	198	2929	207	309	2139	146	64	733	108	381	1625	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3340	5043	1548	3506	5092	1546	1789	4902	1501	1789	5092	1518
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	3340	5043	1548	3506	5092	1546	241	4902	1501	458	5092	1518
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	198	2929	207	309	2139	146	64	733	108	381	1625	226
RTOR Reduction (vph)	0	0	44	0	0	83	0	0	78	0	0	83
Lane Group Flow (vph)	198	2929	163	309	2139	63	64	733	30	381	1625	143
Confl. Peds. (#/hr)	3		10	10		3	2		4	4		2
Heavy Vehicles (%)	6%	4%	3%	1%	3%	4%	2%	7%	7%	2%	3%	6%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4	8		8
Actuated Green, G (s)	6.0	51.1	51.1	6.0	51.1	51.1	33.6	31.2	31.2	44.2	38.8	38.8
Effective Green, g (s)	6.0	51.1	51.1	6.0	51.1	51.1	33.6	31.2	31.2	44.2	38.8	38.8
Actuated g/C Ratio	0.05	0.43	0.43	0.05	0.43	0.43	0.28	0.26	0.26	0.37	0.32	0.32
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	167	2147	659	175	2168	658	98	1275	390	280	1646	491
v/s Ratio Prot	0.06	c0.58		c0.09	0.42		0.01	0.15		c0.11	0.32	
v/s Ratio Perm			0.11			0.04	0.17		0.02	c0.39		0.09
v/c Ratio	1.19	1.36	0.25	1.77	0.99	0.10	0.65	0.57	0.08	1.36	0.99	0.29
Uniform Delay, d1	57.0	34.5	22.1	57.0	34.1	20.6	39.9	38.6	33.5	33.8	40.4	30.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	128.3	167.0	0.9	366.8	16.4	0.3	19.1	1.0	0.2	183.7	19.1	0.7
Delay (s)	185.3	201.4	23.0	423.8	50.5	20.9	59.0	39.6	33.7	217.5	59.5	31.0
Level of Service	F	F	C	F	D	C	E	D	C	F	E	C
Approach Delay (s)		189.4			93.3			40.3			83.6	
Approach LOS		F			F			D			F	

Intersection Summary		
HCM Average Control Delay	121.0	HCM Level of Service F
HCM Volume to Capacity ratio	1.32	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 14.3
Intersection Capacity Utilization	120.9%	ICU Level of Service H
Analysis Period (min)	15	
c Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑		↕	↑↑↑	
Volume (veh/h)	20	5	80	75	2	22	19	827	20	15	2058	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	5	80	75	2	22	19	827	20	15	2058	23
Pedestrians		4			6							2
Lane Width (m)		3.7			3.7							3.7
Walking Speed (m/s)		1.2			1.2							1.2
Percent Blockage		0			1							0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (m)								394				374
pX, platoon unblocked	0.71	0.71	0.71	0.71	0.71	1.00	0.71			1.00		
vC, conflicting volume	2442	2994	702	1680	2996	294	2085			853		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1588	2365	0	516	2367	286	1099			846		
tC, single (s)	7.9	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.7	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	44	79	90	66	91	97	96			98		
cM capacity (veh/h)	36	24	770	222	23	711	430			750		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	105	99	19	331	331	185	15	823	823	435
Volume Left	20	75	19	0	0	0	15	0	0	0
Volume Right	80	22	0	0	0	20	0	0	0	23
cSH	120	218	430	1700	1700	1700	750	1700	1700	1700
Volume to Capacity	0.87	0.45	0.04	0.19	0.19	0.11	0.02	0.48	0.48	0.26
Queue Length 95th (m)	41.0	16.5	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Control Delay (s)	118.5	34.5	13.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0
Lane LOS	F	D	B				A			
Approach Delay (s)	118.5	34.5	0.3				0.1			
Approach LOS	F	D								

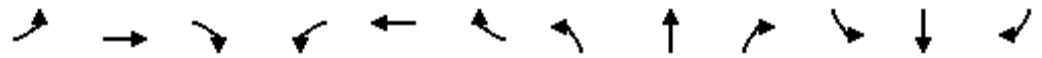
Intersection Summary	
Average Delay	5.1
Intersection Capacity Utilization	59.3%
ICU Level of Service	B
Analysis Period (min)	15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑		↗	↑↑		↗	↑↑↑	↗	↗	↑↑↑	
Volume (vph)	78	250	13	156	412	11	40	655	51	135	1977	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1706	3517		1714	3566		1772	4683	1512	1789	5100	
Flt Permitted	0.42	1.00		0.58	1.00		0.06	1.00	1.00	0.36	1.00	
Satd. Flow (perm)	760	3517		1044	3566		116	4683	1512	673	5100	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	78	250	13	156	412	11	40	655	51	135	1977	90
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	24	0	4	0
Lane Group Flow (vph)	78	260	0	156	422	0	40	655	27	135	2063	0
Confl. Peds. (#/hr)			19	19								
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	12%	8%	2%	2%	6%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	34.5	34.5		34.5	34.5		64.5	64.5	64.5	72.8	72.8	
Effective Green, g (s)	34.5	34.5		34.5	34.5		64.5	64.5	64.5	72.8	72.8	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.54	0.54	0.54	0.61	0.61	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	219	1011		300	1025		62	2517	813	445	3094	
v/s Ratio Prot		0.07			0.12			0.14		0.01	c0.40	
v/s Ratio Perm	0.10			c0.15			0.35		0.02	0.17		
v/c Ratio	0.36	0.26		0.52	0.41		0.65	0.26	0.03	0.30	0.67	
Uniform Delay, d1	33.9	32.9		35.8	34.5		19.6	14.9	13.1	10.2	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	0.6		6.3	1.2		41.8	0.3	0.1	0.8	0.7	
Delay (s)	38.4	33.5		42.1	35.8		61.5	15.2	13.1	11.0	16.3	
Level of Service	D	C		D	D		E	B	B	B	B	
Approach Delay (s)		34.6			37.5			17.5			16.0	
Approach LOS		C			D			B			B	

Intersection Summary

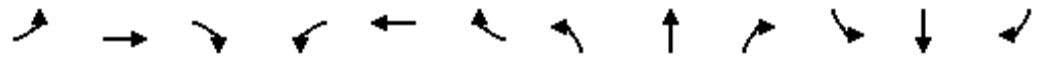
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.7
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	1590	187	261	835	64	47	602	110	147	1981	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1704	3579	1531	1722	3544	1454	1722	5043	1504	1771	5142	1534
Flt Permitted	0.25	1.00	1.00	0.08	1.00	1.00	0.11	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	452	3579	1531	143	3544	1454	196	5043	1504	604	5142	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	83	1590	187	261	835	64	47	602	110	147	1981	140
RTOR Reduction (vph)	0	0	4	0	0	21	0	0	74	0	0	21
Lane Group Flow (vph)	83	1590	183	261	835	43	47	602	36	147	1981	119
Confl. Peds. (#/hr)	16		12	12		16	1		2	2		1
Heavy Vehicles (%)	7%	2%	4%	6%	3%	9%	6%	4%	7%	3%	2%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	52.4	47.6	47.6	59.6	51.8	51.8	37.0	37.0	37.0	49.0	49.0	49.0
Effective Green, g (s)	52.4	47.6	47.6	59.6	51.8	51.8	37.0	37.0	37.0	49.0	49.0	49.0
Actuated g/C Ratio	0.43	0.39	0.39	0.49	0.43	0.43	0.31	0.31	0.31	0.41	0.41	0.41
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	246	1413	604	189	1522	625	60	1547	461	332	2089	623
v/s Ratio Prot	0.01	0.44		c0.10	0.24			0.12		0.03	c0.39	
v/s Ratio Perm	0.13		0.12	c0.58		0.03	0.24		0.02	0.15		0.08
v/c Ratio	0.34	1.13	0.30	1.38	0.55	0.07	0.78	0.39	0.08	0.44	0.95	0.19
Uniform Delay, d1	21.0	36.5	25.1	34.3	25.7	20.2	38.1	32.9	29.7	23.6	34.6	23.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	66.1	0.6	200.9	0.7	0.1	65.1	0.7	0.3	2.0	10.8	0.7
Delay (s)	22.7	102.6	25.7	235.2	26.4	20.3	103.2	33.6	30.0	25.5	45.4	23.7
Level of Service	C	F	C	F	C	C	F	C	C	C	D	C
Approach Delay (s)		91.3			73.0			37.4			42.7	
Approach LOS		F			E			D			D	

Intersection Summary

HCM Average Control Delay	62.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	121.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↗	↗	↑↑↑	↗
Volume (vph)	16	15	129	117	20	14	47	695	51	14	2092	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes		0.98			1.00		1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.89			0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1646			1784		1674	4683	1414	1686	5092	1575
Flt Permitted		0.96			0.62		0.06	1.00	1.00	0.38	1.00	1.00
Satd. Flow (perm)		1589			1144		99	4683	1414	667	5092	1575
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	15	129	117	20	14	47	695	51	14	2092	20
RTOR Reduction (vph)	0	73	0	0	3	0	0	0	21	0	0	3
Lane Group Flow (vph)	0	87	0	0	148	0	47	695	30	14	2092	17
Confl. Peds. (#/hr)	17		4	4		17	5		6	6		5
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	9%	12%	11%	8%	3%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		29.0			29.0		75.7	71.0	71.0	72.1		69.7
Effective Green, g (s)		29.0			29.0		75.7	71.0	71.0	72.1		69.7
Actuated g/C Ratio		0.24			0.24		0.63	0.59	0.59	0.60		0.58
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		383			276		124	2762	834	420	2948	912
v/s Ratio Prot							c0.01	0.15		0.00		c0.41
v/s Ratio Perm		0.05			c0.13		0.22		0.02	0.02		0.01
v/c Ratio		0.23			0.54		0.38	0.25	0.04	0.03		0.71
Uniform Delay, d1		36.7			39.8		14.9	11.9	10.4	9.8		18.1
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.4			7.3		4.0	0.2	0.1	0.1		1.5
Delay (s)		38.1			47.1		18.9	12.1	10.4	9.8		19.6
Level of Service		D			D		B	B	B	A		B
Approach Delay (s)		38.1			47.1			12.4				19.4
Approach LOS		D			D			B				B

Intersection Summary

HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵		↵	↑↑↑	↑↑↑	↵
Volume (veh/h)	50	90	20	708	2351	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	50	90	20	708	2351	39
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					349	
pX, platoon unblocked	0.63	0.63	0.63			
vC, conflicting volume	2631	788	2394			
vC1, stage 1 conf vol	2355					
vC2, stage 2 conf vol	276					
vCu, unblocked vol	1544	0	1169			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.3	2.2			
p0 queue free %	69	87	95			
cM capacity (veh/h)	162	685	381			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	140	20	236	236	236	784	784	784	39
Volume Left	50	20	0	0	0	0	0	0	0
Volume Right	90	0	0	0	0	0	0	0	39
cSH	318	381	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.44	0.05	0.14	0.14	0.14	0.46	0.46	0.46	0.02
Queue Length 95th (m)	16.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	24.9	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B							
Approach Delay (s)	24.9	0.4				0.0			
Approach LOS	C								

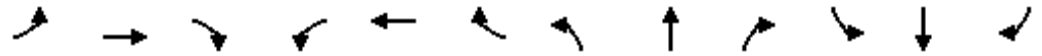
Intersection Summary									
Average Delay				1.2					
Intersection Capacity Utilization			60.4%		ICU Level of Service				B
Analysis Period (min)			15						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	35	517	72	72	221	142	18	477	81	103	2251	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	3500		1738	3318		1825	4810		1754	5132	
Flt Permitted	0.47	1.00		0.28	1.00		0.06	1.00		0.41	1.00	
Satd. Flow (perm)	845	3500		506	3318		120	4810		759	5132	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	517	72	72	221	142	18	477	81	103	2251	22
RTOR Reduction (vph)	0	5	0	0	87	0	0	20	0	0	1	0
Lane Group Flow (vph)	35	584	0	72	276	0	18	538	0	103	2272	0
Confl. Peds. (#/hr)							1		3	3		1
Heavy Vehicles (%)	8%	2%	5%	5%	2%	6%	0%	7%	3%	4%	2%	6%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	32.2	32.2		32.2	32.2		64.2	64.2		74.9	74.9	
Effective Green, g (s)	32.2	32.2		32.2	32.2		64.2	64.2		74.9	74.9	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.54	0.54		0.62	0.62	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	227	939		136	890		64	2573		532	3203	
v/s Ratio Prot		c0.17			0.08			0.11		0.01	c0.44	
v/s Ratio Perm	0.04			0.14			0.15			0.11		
v/c Ratio	0.15	0.62		0.53	0.31		0.28	0.21		0.19	0.71	
Uniform Delay, d1	33.5	38.6		37.4	35.0		15.3	14.6		9.1	15.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	3.1		14.0	0.9		10.7	0.2		0.4	0.9	
Delay (s)	34.9	41.6		51.4	35.9		25.9	14.8		9.4	16.1	
Level of Service	C	D		D	D		C	B		A	B	
Approach Delay (s)		41.3			38.5			15.1			15.8	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	2363	229	357	1490	78	129	404	129	327	1938	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	189	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	2363	229	357	1490	78	129	404	129	327	1938	286
RTOR Reduction (vph)	0	0	72	0	0	47	0	0	104	0	0	106
Lane Group Flow (vph)	57	2363	157	357	1490	31	129	404	25	327	1938	180
Confl. Peds. (#/hr)	1		3	3		1	3		3	3		3
Heavy Vehicles (%)	0%	5%	2%	4%	9%	13%	9%	4%	23%	2%	2%	3%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	46.3	40.7	40.7	10.0	48.1	48.1	4.0	23.7	23.7	16.6	36.3	36.3
Effective Green, g (s)	46.3	40.7	40.7	10.0	48.1	48.1	4.0	23.7	23.7	16.6	36.3	36.3
Actuated g/C Ratio	0.39	0.34	0.34	0.08	0.40	0.40	0.03	0.20	0.20	0.14	0.30	0.30
Clearance Time (s)	4.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	149	1694	534	284	1929	571	108	996	258	480	1555	471
v/s Ratio Prot	0.02	c0.47		c0.10	c0.31		0.04	0.08		c0.09	c0.38	
v/s Ratio Perm	0.13		0.10			0.02			0.02			0.12
v/c Ratio	0.38	1.39	0.29	1.26	0.77	0.05	1.19	0.41	0.10	0.68	1.25	0.38
Uniform Delay, d1	24.8	39.6	29.1	55.0	31.2	22.0	58.0	42.0	39.4	49.2	41.9	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	181.4	1.4	141.1	3.1	0.2	148.0	0.6	0.4	5.1	116.4	1.1
Delay (s)	28.2	221.0	30.5	196.1	34.3	22.2	206.0	42.6	39.8	54.3	158.3	34.1
Level of Service	C	F	C	F	C	C	F	D	D	D	F	C
Approach Delay (s)		200.4			63.8			73.9			131.0	
Approach LOS		F			E			E			F	

Intersection Summary

HCM Average Control Delay	133.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	36.3
Intersection Capacity Utilization	121.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	23	7	584	2426	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	23	7	584	2426	7
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)					179	
pX, platoon unblocked	0.69	0.69	0.69			
vC, conflicting volume	2643	817	2438			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1796	0	1497			
tC, single (s)	7.2	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.3	2.2			
p0 queue free %	74	97	98			
cM capacity (veh/h)	38	735	310			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	33	7	195	195	195	970	970	492
Volume Left	10	7	0	0	0	0	0	0
Volume Right	23	0	0	0	0	0	0	7
cSH	113	310	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.02	0.11	0.11	0.11	0.57	0.57	0.29
Queue Length 95th (m)	8.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	49.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	C						
Approach Delay (s)	49.4	0.2				0.0		
Approach LOS	E							

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		57.0%	ICU Level of Service B
Analysis Period (min)		15	

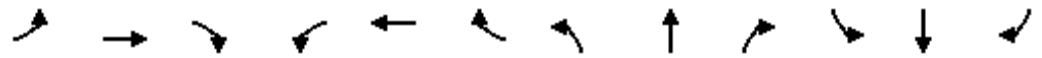


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	9	60	31	508	2480	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	60	31	508	2480	23
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (m)				194		
pX, platoon unblocked	0.95					
vC, conflicting volume	2728	843	2508			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2642	843	2508			
tC, single (s)	6.8	7.0	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	39	80	80			
cM capacity (veh/h)	15	302	154			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	69	31	169	169	169	992	992	519
Volume Left	9	31	0	0	0	0	0	0
Volume Right	60	0	0	0	0	0	0	23
cSH	85	154	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.81	0.20	0.10	0.10	0.10	0.58	0.58	0.31
Queue Length 95th (m)	31.7	5.5	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	135.3	34.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	D						
Approach Delay (s)	135.3	2.0				0.0		
Approach LOS	F							

Intersection Summary

Average Delay	3.3
Intersection Capacity Utilization	59.3%
ICU Level of Service	B
Analysis Period (min)	15

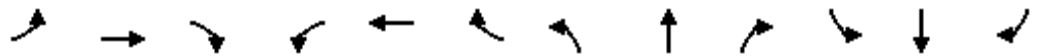


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↘
Volume (vph)	110	583	61	124	697	149	101	901	129	232	442	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.6	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1560	3650	1633	1789	3614	1633	1825	5043	1633	1825	4641	
Flt Permitted	0.22	1.00	1.00	0.31	1.00	1.00	0.45	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	357	3650	1633	586	3614	1633	871	5043	1633	382	4641	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	583	61	124	697	149	101	901	129	232	442	70
RTOR Reduction (vph)	0	0	30	0	0	60	0	0	56	0	18	0
Lane Group Flow (vph)	110	583	31	124	697	89	101	901	73	232	494	0
Heavy Vehicles (%)	17%	0%	0%	2%	1%	0%	0%	4%	0%	0%	7%	34%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		2	6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	46.6	36.8	36.8	45.0	36.0	36.0	45.1	40.1	40.1	58.4	50.4	
Effective Green, g (s)	46.6	36.8	36.8	45.0	36.0	36.0	45.1	40.1	40.1	58.4	50.4	
Actuated g/C Ratio	0.39	0.31	0.31	0.38	0.30	0.30	0.38	0.33	0.33	0.49	0.42	
Clearance Time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.6	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	237	1119	501	310	1084	490	367	1685	546	375	1949	
v/s Ratio Prot	c0.04	0.16		0.03	c0.19		0.01	0.18		c0.08	0.11	
v/s Ratio Perm	0.14		0.02	0.12		0.05	0.09		0.04	c0.22		
v/c Ratio	0.46	0.52	0.06	0.40	0.64	0.18	0.28	0.53	0.13	0.62	0.25	
Uniform Delay, d1	25.5	34.3	29.4	25.7	36.4	31.1	24.7	32.4	27.8	19.6	22.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.0	1.7	0.2	1.8	2.9	0.8	0.9	1.2	0.5	4.3	0.3	
Delay (s)	28.4	36.1	29.6	27.5	39.4	31.9	25.6	33.6	28.4	24.0	22.9	
Level of Service	C	D	C	C	D	C	C	C	C	C	C	
Approach Delay (s)		34.4			36.7			32.3			23.2	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖	↑↑	↖	↖	↑↑	↖
Volume (vph)	449	1304	276	124	1642	95	385	599	105	170	342	573
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	4856	1601	1772	4995	1266	1738	3579	1478	1690	3510	1633
Flt Permitted	0.95	1.00	1.00	0.16	1.00	1.00	0.45	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	3471	4856	1601	291	4995	1266	817	3579	1478	567	3510	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	449	1304	276	124	1642	95	385	599	105	170	342	573
RTOR Reduction (vph)	0	0	131	0	0	23	0	0	76	0	0	16
Lane Group Flow (vph)	449	1304	145	124	1642	72	385	599	29	170	342	557
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	2%	8%	2%	3%	5%	29%	5%	2%	9%	8%	4%	0%
Turn Type	Prot		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8	2		2	6		6
Actuated Green, G (s)	15.8	49.3	49.3	49.1	39.8	39.8	43.6	32.6	32.6	36.6	28.6	44.4
Effective Green, g (s)	15.8	49.3	49.3	49.1	39.8	39.8	43.6	32.6	32.6	36.6	28.6	44.4
Actuated g/C Ratio	0.13	0.41	0.41	0.41	0.33	0.33	0.36	0.27	0.27	0.31	0.24	0.37
Clearance Time (s)	6.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	7.4	3.0	7.4	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	457	1995	658	234	1657	420	389	972	402	248	837	604
v/s Ratio Prot	c0.13	0.27		0.04	c0.33		c0.10	0.17		0.05	0.10	0.12
v/s Ratio Perm			0.09	0.18		0.06	c0.26		0.02	0.16		0.22
v/c Ratio	0.98	0.65	0.22	0.53	0.99	0.17	0.99	0.62	0.07	0.69	0.41	0.92
Uniform Delay, d1	52.0	28.5	22.9	23.0	39.9	28.4	35.8	38.2	32.5	33.5	38.6	36.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.6	1.0	0.4	4.1	20.0	0.4	42.7	2.9	0.3	9.7	1.5	20.6
Delay (s)	89.5	29.5	23.2	27.1	59.9	28.8	78.5	41.2	32.8	43.2	40.0	56.7
Level of Service	F	C	C	C	E	C	E	D	C	D	D	E
Approach Delay (s)		41.9			56.1			53.5			49.3	
Approach LOS		D			E			D			D	

Intersection Summary

HCM Average Control Delay	49.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↖	↗	↑↑↑	
Volume (vph)	15	15	15	101	20	25	25	1045	19	7	647	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes		1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.95			0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98			0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1797			1770		1824	5092	1598	1824	5065	
Flt Permitted		0.86			0.77		0.38	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1579			1401		739	5092	1598	491	5065	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	15	101	20	25	25	1045	19	7	647	25
RTOR Reduction (vph)	0	11	0	0	8	0	0	0	9	0	3	0
Lane Group Flow (vph)	0	34	0	0	138	0	25	1045	10	7	669	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	13%	0%	3%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		13.4			13.4		29.4	29.4	29.4	29.4	29.4	
Effective Green, g (s)		13.4			13.4		29.4	29.4	29.4	29.4	29.4	
Actuated g/C Ratio		0.24			0.24		0.52	0.52	0.52	0.52	0.52	
Clearance Time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		376			333		386	2659	834	256	2645	
v/s Ratio Prot								c0.21				0.13
v/s Ratio Perm		0.02			c0.10		0.03		0.01	0.01		
v/c Ratio		0.09			0.42		0.06	0.39	0.01	0.03	0.25	
Uniform Delay, d1		16.7			18.1		6.7	8.1	6.5	6.5	7.4	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			1.8		0.1	0.2	0.0	0.1	0.1	
Delay (s)		16.9			19.9		6.8	8.3	6.5	6.6	7.5	
Level of Service		B			B		A	A	A	A	A	
Approach Delay (s)		16.9			19.9			8.2			7.5	
Approach LOS		B			B			A			A	

Intersection Summary

HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	352	2016	197	217	2156	90	465	809	277	234	315	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	5193	1576	3404	5193	1604	1822	5043	1571	1823	4948	1579
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	3471	5193	1576	3404	5193	1604	970	5043	1571	506	4948	1579
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	352	2016	197	217	2156	90	465	809	277	234	315	355
RTOR Reduction (vph)	0	0	39	0	0	17	0	0	103	0	0	11
Lane Group Flow (vph)	352	2016	158	217	2156	73	465	809	174	234	315	344
Confl. Peds. (#/hr)	5		11	11		5	5		14	14		5
Heavy Vehicles (%)	2%	1%	1%	4%	1%	0%	0%	4%	1%	0%	6%	2%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	9.0	47.3	47.3	7.0	45.3	45.3	46.0	35.0	35.0	40.0	32.0	41.0
Effective Green, g (s)	9.0	47.3	47.3	7.0	45.3	45.3	46.0	35.0	35.0	40.0	32.0	41.0
Actuated g/C Ratio	0.08	0.39	0.39	0.06	0.38	0.38	0.38	0.29	0.29	0.33	0.27	0.34
Clearance Time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	260	2047	621	199	1960	606	450	1471	458	256	1319	539
v/s Ratio Prot	c0.10	0.39		0.06	c0.42		c0.09	0.16		0.06	0.06	0.05
v/s Ratio Perm			0.10			0.05	c0.30		0.11	0.24		0.17
v/c Ratio	1.35	0.98	0.25	1.09	1.10	0.12	1.03	0.55	0.38	0.91	0.24	0.64
Uniform Delay, d1	55.5	36.0	24.5	56.5	37.4	24.4	34.9	35.9	33.8	34.3	34.5	33.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	182.4	16.6	1.0	90.0	53.5	0.4	51.3	1.5	2.4	35.5	0.4	3.5
Delay (s)	237.9	52.6	25.5	146.5	90.8	24.8	86.2	37.3	36.2	69.8	34.9	36.7
Level of Service	F	D	C	F	F	C	F	D	D	E	C	D
Approach Delay (s)		76.0			93.3			51.8			44.7	
Approach LOS		E			F			D			D	

Intersection Summary

HCM Average Control Delay	72.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.7
Intersection Capacity Utilization	122.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↑↑↑	↗	↙	↑↑↑
Volume (vph)	164	57	1088	165	80	731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frbp, ped/bikes	1.00	0.97	1.00	0.92	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1615	1369	4902	1377	1464	4768
Flt Permitted	0.95	1.00	1.00	1.00	0.24	1.00
Satd. Flow (perm)	1615	1369	4902	1377	378	4768
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	164	57	1088	165	80	731
RTOR Reduction (vph)	0	44	0	52	0	0
Lane Group Flow (vph)	164	13	1088	113	80	731
Confl. Peds. (#/hr)	4	23		27	27	
Heavy Vehicles (%)	13%	16%	7%	9%	23%	10%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	14.1	14.1	35.6	35.6	34.6	34.6
Effective Green, g (s)	14.1	14.1	35.6	35.6	34.6	34.6
Actuated g/C Ratio	0.22	0.22	0.55	0.55	0.54	0.54
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	355	301	2718	764	204	2570
v/s Ratio Prot	c0.10		c0.22			0.15
v/s Ratio Perm		0.01		0.08	0.21	
v/c Ratio	0.46	0.04	0.40	0.15	0.39	0.28
Uniform Delay, d1	21.8	19.7	8.2	6.9	8.7	8.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.1	0.2	0.2	2.6	0.1
Delay (s)	23.7	19.8	8.4	7.1	11.2	8.2
Level of Service	C	B	A	A	B	A
Approach Delay (s)	22.7		8.2			8.5
Approach LOS	C		A			A

Intersection Summary

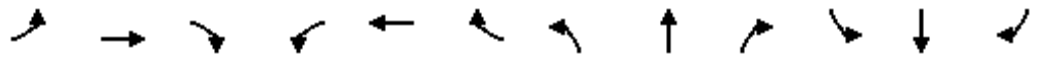
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	14.5
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Volume (vph)	15	10	10	25	5	14	58	1508	72	13	681	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1745		1781	1709		1789	5142	1633	1825	5092	1633
Flt Permitted	0.75	1.00		0.74	1.00		0.38	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	1431	1745		1395	1709		718	5142	1633	301	5092	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	10	10	25	5	14	58	1508	72	13	681	23
RTOR Reduction (vph)	0	9	0	0	13	0	0	0	8	0	0	4
Lane Group Flow (vph)	15	11	0	25	6	0	58	1508	64	13	681	19
Confl. Peds. (#/hr)			15	15								
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	2%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.2	6.2		6.2	6.2		90.5	90.5	90.5	90.5	90.5	90.5
Effective Green, g (s)	6.2	6.2		6.2	6.2		90.5	90.5	90.5	90.5	90.5	90.5
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	81	98		78	96		590	4223	1341	247	4182	1341
v/s Ratio Prot		0.01			0.00			c0.29				0.13
v/s Ratio Perm	0.01			c0.02			0.08		0.04	0.04		0.01
v/c Ratio	0.19	0.11		0.32	0.06		0.10	0.36	0.05	0.05	0.16	0.01
Uniform Delay, d1	49.6	49.4		50.0	49.2		1.9	2.5	1.8	1.8	2.0	1.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	1.0		4.9	0.6		0.3	0.2	0.1	0.4	0.1	0.0
Delay (s)	51.9	50.4		54.9	49.8		2.2	2.7	1.9	2.2	2.1	1.8
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		51.0			52.7			2.7			2.1	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	110.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕	↖	↗	↕	↖
Volume (vph)	77	274	116	158	316	65	179	1555	138	62	605	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1786	3463		1789	3454		1807	5142	1633	1789	5043	1633
Flt Permitted	0.48	1.00		0.40	1.00		0.39	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	910	3463		745	3454		738	5142	1633	254	5043	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	77	274	116	158	316	65	179	1555	138	62	605	31
RTOR Reduction (vph)	0	43	0	0	16	0	0	0	52	0	0	15
Lane Group Flow (vph)	77	347	0	158	365	0	179	1555	86	62	605	16
Confl. Peds. (#/hr)	44					44						
Heavy Vehicles (%)	1%	1%	0%	2%	2%	2%	1%	2%	0%	2%	4%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.8	19.3		27.8	20.8		63.5	63.5	63.5	56.5	56.5	56.5
Effective Green, g (s)	24.8	19.3		27.8	20.8		63.5	63.5	63.5	56.5	56.5	56.5
Actuated g/C Ratio	0.23	0.18		0.26	0.19		0.59	0.59	0.59	0.53	0.53	0.53
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	255	623		261	670		477	3046	967	134	2658	861
v/s Ratio Prot	0.02	0.10		c0.04	0.11		0.01	c0.30			0.12	
v/s Ratio Perm	0.05			c0.12			0.21		0.05	0.24		0.01
v/c Ratio	0.30	0.56		0.61	0.54		0.38	0.51	0.09	0.46	0.23	0.02
Uniform Delay, d1	33.1	40.0		32.8	38.9		10.3	12.8	9.4	15.9	13.6	12.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.8		5.7	1.6		1.0	0.6	0.2	11.1	0.2	0.0
Delay (s)	34.5	41.9		38.6	40.5		11.4	13.4	9.6	26.9	13.8	12.2
Level of Service	C	D		D	D		B	B	A	C	B	B
Approach Delay (s)		40.7			39.9			12.9			14.9	
Approach LOS		D			D			B			B	

Intersection Summary		
HCM Average Control Delay	21.0	HCM Level of Service C
HCM Volume to Capacity ratio	0.52	
Actuated Cycle Length (s)	107.2	Sum of lost time (s) 12.6
Intersection Capacity Utilization	88.3%	ICU Level of Service E
Analysis Period (min)	15	
c Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖	↑↑↑	↖
Volume (vph)	387	1562	138	205	2002	382	148	1186	130	276	492	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	4948	1517	3404	5092	1580	1807	5043	1580	1722	4995	1526
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.46	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	3437	4948	1517	3404	5092	1580	880	5043	1580	210	4995	1526
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	387	1562	138	205	2002	382	148	1186	130	276	492	122
RTOR Reduction (vph)	0	0	89	0	0	166	0	0	86	0	0	86
Lane Group Flow (vph)	387	1562	49	205	2002	216	148	1186	44	276	492	36
Confl. Peds. (#/hr)	1		3	3		1			1	1		
Heavy Vehicles (%)	3%	6%	6%	4%	3%	2%	1%	4%	2%	6%	5%	7%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4	8		8
Actuated Green, G (s)	11.0	42.7	42.7	9.0	40.7	40.7	43.1	31.6	31.6	49.6	35.1	35.1
Effective Green, g (s)	11.0	42.7	42.7	9.0	40.7	40.7	43.1	31.6	31.6	49.6	35.1	35.1
Actuated g/C Ratio	0.09	0.36	0.36	0.08	0.34	0.34	0.36	0.26	0.26	0.41	0.29	0.29
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	3.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	315	1761	540	255	1727	536	405	1328	416	276	1461	446
v/s Ratio Prot	c0.11	0.32		0.06	c0.39		0.04	0.24		c0.13	0.10	
v/s Ratio Perm			0.03			0.14	0.10		0.03	c0.29		0.02
v/c Ratio	1.23	0.89	0.09	0.80	1.16	0.40	0.37	0.89	0.11	1.00	0.34	0.08
Uniform Delay, d1	54.5	36.4	25.7	54.6	39.6	30.4	26.8	42.6	33.5	34.3	33.3	30.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	127.6	7.0	0.3	18.6	78.6	2.3	1.2	8.5	0.2	54.2	0.3	0.2
Delay (s)	182.1	43.4	26.1	73.3	118.2	32.6	28.0	51.1	33.7	88.4	33.6	30.9
Level of Service	F	D	C	E	F	C	C	D	C	F	C	C
Approach Delay (s)		68.0			102.0			47.2			50.2	
Approach LOS		E			F			D			D	

Intersection Summary

HCM Average Control Delay	74.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑		↗	↑↑↑	
Volume (veh/h)	14	13	38	41	15	26	63	1511	72	19	843	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	14	13	38	41	15	26	63	1511	72	19	843	24
Pedestrians					1			1				
Lane Width (m)					3.7			3.7				
Walking Speed (m/s)					1.2			1.2				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)								394			374	
pX, platoon unblocked	0.84	0.84	0.98	0.84	0.84	0.83	0.98			0.83		
vC, conflicting volume	1556	2603	294	2038	2579	541	867			1584		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	804	2053	196	1379	2024	0	782			973		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			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 %	91	69	95	30	66	97	92			97		
cM capacity (veh/h)	153	42	799	59	44	901	794			592		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	65	82	63	604	604	374	19	337	337	193
Volume Left	14	41	63	0	0	0	19	0	0	0
Volume Right	38	26	0	0	0	72	0	0	0	24
cSH	145	77	794	1700	1700	1700	592	1700	1700	1700
Volume to Capacity	0.45	1.07	0.08	0.36	0.36	0.22	0.03	0.20	0.20	0.11
Queue Length 95th (m)	15.5	44.8	2.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Control Delay (s)	48.8	218.8	9.9	0.0	0.0	0.0	11.3	0.0	0.0	0.0
Lane LOS	E	F	A				B			
Approach Delay (s)	48.8	218.8	0.4				0.2			
Approach LOS	E	F								

Intersection Summary		
Average Delay		8.2
Intersection Capacity Utilization	53.7%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗↘	↖	↖	↖↗↘	
Volume (vph)	119	261	73	116	378	95	138	1458	188	144	735	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1772	3342		1791	3505		1825	5142	1633	1789	4987	
Flt Permitted	0.38	1.00		0.51	1.00		0.34	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	709	3342		955	3505		646	5142	1633	212	4987	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	119	261	73	116	378	95	138	1458	188	144	735	68
RTOR Reduction (vph)	0	21	0	0	19	0	0	0	52	0	9	0
Lane Group Flow (vph)	119	313	0	116	454	0	138	1458	136	144	794	0
Confl. Peds. (#/hr)			14	14								
Heavy Vehicles (%)	3%	0%	23%	1%	1%	1%	0%	2%	0%	2%	4%	2%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	34.5	34.5		34.5	34.5		61.5	61.5	61.5	72.8	72.8	
Effective Green, g (s)	34.5	34.5		34.5	34.5		61.5	61.5	61.5	72.8	72.8	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.51	0.51	0.51	0.61	0.61	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	204	961		275	1008		331	2635	837	221	3025	
v/s Ratio Prot		0.09			0.13			0.28		c0.04	0.16	
v/s Ratio Perm	c0.17			0.12			0.21		0.08	c0.36		
v/c Ratio	0.58	0.33		0.42	0.45		0.42	0.55	0.16	0.65	0.26	
Uniform Delay, d1	36.6	33.6		34.7	35.0		18.1	19.9	15.6	13.8	11.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.6	0.9		4.7	1.5		3.8	0.8	0.4	8.9	0.1	
Delay (s)	48.2	34.5		39.4	36.5		22.0	20.7	16.0	22.8	11.1	
Level of Service	D	C		D	D		C	C	B	C	B	
Approach Delay (s)		38.1			37.0			20.3			12.9	
Approach LOS		D			D			C			B	

Intersection Summary

HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Volume (vph)	227	707	173	204	1316	177	264	1612	126	148	660	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frft	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3614	1610	1772	3614	1617	1789	5193	1573	1825	5142	1609
Flt Permitted	0.09	1.00	1.00	0.25	1.00	1.00	0.24	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	178	3614	1610	463	3614	1617	459	5193	1573	280	5142	1609
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	227	707	173	204	1316	177	264	1612	126	148	660	120
RTOR Reduction (vph)	0	0	68	0	0	38	0	0	31	0	0	53
Lane Group Flow (vph)	227	707	105	204	1316	139	264	1612	95	148	660	67
Confl. Peds. (#/hr)			2	2			2		4	4		2
Heavy Vehicles (%)	0%	1%	0%	3%	1%	1%	2%	1%	2%	0%	2%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	55.2	43.2	43.2	58.8	45.0	45.0	48.0	38.0	38.0	34.4	27.4	27.4
Effective Green, g (s)	55.2	43.2	43.2	58.8	45.0	45.0	48.0	38.0	38.0	34.4	27.4	27.4
Actuated g/C Ratio	0.46	0.36	0.36	0.49	0.38	0.38	0.40	0.32	0.32	0.29	0.23	0.23
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	247	1301	580	377	1355	606	379	1644	498	170	1174	367
v/s Ratio Prot	c0.09	0.20		c0.06	c0.36		0.10	c0.31		c0.05	0.13	
v/s Ratio Perm	0.33		0.07	0.20		0.09	0.18		0.06	0.20		0.04
v/c Ratio	0.92	0.54	0.18	0.54	0.97	0.23	0.70	0.98	0.19	0.87	0.56	0.18
Uniform Delay, d1	33.0	30.6	26.3	19.1	36.9	25.6	26.2	40.6	29.8	37.0	41.0	37.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.2	0.8	0.3	2.8	18.1	0.4	6.9	18.0	0.8	37.5	1.9	1.1
Delay (s)	70.2	31.4	26.6	21.9	55.0	26.0	33.1	58.7	30.7	74.5	42.9	38.4
Level of Service	E	C	C	C	D	C	C	E	C	E	D	D
Approach Delay (s)		38.6			48.0			53.5			47.4	
Approach LOS		D			D			D			D	

Intersection Summary

HCM Average Control Delay	48.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑↑	↕	↕	↑↑↑	↕
Volume (vph)	18	20	62	59	17	37	132	1700	115	15	848	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes		0.99			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.92			0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1660			1737		1824	5193	1559	1825	5142	1590
Flt Permitted		0.93			0.79		0.29	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)		1560			1405		558	5193	1559	209	5142	1590
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	20	62	59	17	37	132	1700	115	15	848	50
RTOR Reduction (vph)	0	49	0	0	14	0	0	0	21	0	0	19
Lane Group Flow (vph)	0	51	0	0	99	0	132	1700	94	15	848	31
Confl. Peds. (#/hr)	18		5	5		18	2		2	2		2
Heavy Vehicles (%)	11%	0%	2%	2%	0%	0%	0%	1%	2%	0%	2%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		24.0			24.0		84.0	78.0	78.0	77.8		75.4
Effective Green, g (s)		24.0			24.0		84.0	78.0	78.0	77.8		75.4
Actuated g/C Ratio		0.20			0.20		0.69	0.64	0.64	0.64		0.62
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		306			275		445	3309	993	165		3168
v/s Ratio Prot							c0.01	c0.33		0.00		0.16
v/s Ratio Perm		0.03			c0.07		0.19		0.06	0.06		0.02
v/c Ratio		0.17			0.36		0.30	0.51	0.09	0.09		0.27
Uniform Delay, d1		40.9			42.5		6.8	12.0	8.6	8.9		10.8
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.2			3.6		0.8	0.6	0.2	0.5		0.2
Delay (s)		42.1			46.2		7.6	12.5	8.8	9.4		11.0
Level of Service		D			D		A	B	A	A		B
Approach Delay (s)		42.1			46.2			12.0				10.9
Approach LOS		D			D			B				B

Intersection Summary

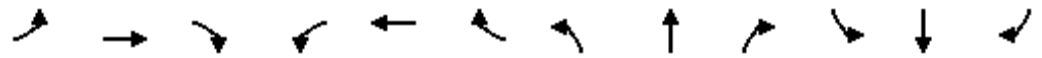
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	122.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	50	95	2006	982	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	50	95	2006	982	45
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					349	
pX, platoon unblocked	0.91	0.91	0.91			
vC, conflicting volume	1845	331	1031			
vC1, stage 1 conf vol	986					
vC2, stage 2 conf vol	859					
vCu, unblocked vol	1585	0	691			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	95	88			
cM capacity (veh/h)	263	975	798			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	71	95	669	669	669	327	327	327	45
Volume Left	21	95	0	0	0	0	0	0	0
Volume Right	50	0	0	0	0	0	0	0	45
cSH	542	798	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.13	0.12	0.39	0.39	0.39	0.19	0.19	0.19	0.03
Queue Length 95th (m)	3.4	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	12.6	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B							
Approach Delay (s)	12.6	0.5				0.0			
Approach LOS	B								

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	49.7%		ICU Level of Service
Analysis Period (min)	15		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	180	97	173	299	144	181	1949	158	82	896	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1742	3228		1748	3267		1787	5081		1738	5002	
Flt Permitted	0.39	1.00		0.56	1.00		0.29	1.00		0.06	1.00	
Satd. Flow (perm)	715	3228		1034	3267		553	5081		102	5002	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	56	180	97	173	299	144	181	1949	158	82	896	37
RTOR Reduction (vph)	0	59	0	0	49	0	0	8	0	0	4	0
Lane Group Flow (vph)	56	218	0	173	394	0	181	2099	0	82	929	0
Confl. Peds. (#/hr)	13		17	17		13	5		5	5		5
Heavy Vehicles (%)	4%	7%	4%	3%	5%	6%	2%	2%	1%	5%	4%	8%
Turn Type	Perm		Perm		Perm		pm+pt					
Protected Phases		4			8			2			1	6
Permitted Phases	4			8		2				6		
Actuated Green, G (s)	30.2	30.2		30.2	30.2		68.3	68.3		75.9	75.9	
Effective Green, g (s)	30.2	30.2		30.2	30.2		68.3	68.3		75.9	75.9	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.57	0.57		0.64	0.64	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	181	819		262	829		317	2916		119	3190	
v/s Ratio Prot		0.07			0.12			0.41		c0.02	0.19	
v/s Ratio Perm	0.08			c0.17		0.33				c0.42		
v/c Ratio	0.31	0.27		0.66	0.48		0.57	0.72		0.69	0.29	
Uniform Delay, d1	36.0	35.5		39.8	37.7		16.1	18.4		16.7	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	0.8		12.4	2.0		7.3	1.6		19.3	0.1	
Delay (s)	40.3	36.3		52.2	39.6		23.3	20.0		36.1	9.7	
Level of Service	D	D		D	D		C	B		D	A	
Approach Delay (s)		37.0			43.2			20.2			11.8	
Approach LOS		D			D			C			B	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	344	1710	406	380	2605	214	527	1813	244	188	811	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	176	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	344	1710	406	380	2605	214	527	1813	244	188	811	157
RTOR Reduction (vph)	0	0	139	0	0	119	0	0	127	0	0	129
Lane Group Flow (vph)	344	1710	267	380	2605	95	527	1813	117	188	811	28
Confl. Peds. (#/hr)	5		2	2		5			12	12		
Heavy Vehicles (%)	0%	7%	5%	19%	6%	7%	0%	1%	5%	8%	6%	8%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	54.7	43.7	43.7	11.0	47.7	47.7	15.0	29.3	29.3	7.0	21.3	21.3
Effective Green, g (s)	54.7	43.7	43.7	11.0	47.7	47.7	15.0	29.3	29.3	7.0	21.3	21.3
Actuated g/C Ratio	0.46	0.36	0.36	0.09	0.40	0.40	0.12	0.24	0.24	0.06	0.18	0.18
Clearance Time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	231	1785	558	273	1967	594	443	1268	367	191	878	268
v/s Ratio Prot	c0.14	0.35		0.13	c0.53		c0.15	c0.35		0.06	0.16	
v/s Ratio Perm	c0.54		0.17			0.06			0.08			0.02
v/c Ratio	1.49	0.96	0.48	1.39	1.32	0.16	1.19	1.43	0.32	0.98	0.92	0.10
Uniform Delay, d1	34.3	37.3	29.4	54.5	36.1	23.3	52.5	45.4	37.2	56.4	48.6	41.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	241.7	13.4	2.9	197.3	149.6	0.6	105.9	198.0	1.1	60.5	15.7	0.4
Delay (s)	276.0	50.7	32.3	251.8	185.8	23.8	158.4	243.4	38.2	117.0	64.2	41.7
Level of Service	F	D	C	F	F	C	F	F	D	F	E	D
Approach Delay (s)		79.2			182.8			206.7			69.7	
Approach LOS		E			F			F			E	

Intersection Summary

HCM Average Control Delay	148.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	131.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	7	18	2295	1114	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	3	7	18	2295	1114	9
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)					179	
pX, platoon unblocked	0.94	0.94	0.94			
vC, conflicting volume	1924	381	1128			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1752	104	902			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	97			
cM capacity (veh/h)	71	874	711			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	10	18	765	765	765	446	446	232
Volume Left	3	18	0	0	0	0	0	0
Volume Right	7	0	0	0	0	0	0	9
cSH	199	711	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.05	0.03	0.45	0.45	0.45	0.26	0.26	0.14
Queue Length 95th (m)	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	24.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B						
Approach Delay (s)	24.0	0.1				0.0		
Approach LOS	C							

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	55	108	2263	1089	42
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	55	108	2263	1089	42
Pedestrians	2			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)				194		
pX, platoon unblocked	0.77					
vC, conflicting volume	2082	388	1133			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1349	388	1133			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	91	82			
cM capacity (veh/h)	91	608	617			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	74	108	754	754	754	436	436	260
Volume Left	19	108	0	0	0	0	0	0
Volume Right	55	0	0	0	0	0	0	42
cSH	248	617	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.30	0.18	0.44	0.44	0.44	0.26	0.26	0.15
Queue Length 95th (m)	9.2	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	25.6	12.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B						
Approach Delay (s)	25.6	0.5				0.0		
Approach LOS	D							

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix I

2021 Future Conditions –

Queuing Analysis

Summary of All Intervals

Run Number	1	2	3	4	5	Avg	
Start Time	6:45	6:45	6:45	6:45	6:45	6:45	
End Time	8:00	8:00	8:00	8:00	8:00	8:00	
Total Time (min)	75	75	75	75	75	75	
Time Recorded (min)	60	60	60	60	60	60	
# of Intervals	2	2	2	2	2	2	
# of Recorded Intvls	1	1	1	1	1	1	
Vehs Entered	26497	26242	26117	26475	26223	25699	26205
Vehs Exited	25376	25086	25212	25427	25172	24775	25176
Starting Vehs	2010	2046	2041	2035	2142	2094	2055
Ending Vehs	3131	3202	2946	3083	3193	3018	3086
Denied Entry Before	91	158	200	202	192	151	162
Denied Entry After	3922	4289	4182	4190	4403	4822	4299
Travel Distance (km)	51774	51586	51172	51732	51622	50761	51441
Travel Time (hr)	4451.2	4746.1	4511.2	4640.0	4891.6	4908.6	4691.5
Total Delay (hr)	3576.4	3874.3	3647.2	3765.0	4018.4	4050.9	3822.0
Total Stops	84099	86161	82885	86468	87109	85785	85413
Fuel Used (l)	73552.9	75920.6	73494.3	75254.2	77304.4	76805.5	75388.7

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg	
Vehs Entered	26497	26242	26117	26475	26223	25699	26205
Vehs Exited	25376	25086	25212	25427	25172	24775	25176
Starting Vehs	2010	2046	2041	2035	2142	2094	2055
Ending Vehs	3131	3202	2946	3083	3193	3018	3086
Denied Entry Before	91	158	200	202	192	151	162
Denied Entry After	3922	4289	4182	4190	4403	4822	4299
Travel Distance (km)	51774	51586	51172	51732	51622	50761	51441
Travel Time (hr)	4451.2	4746.1	4511.2	4640.0	4891.6	4908.6	4691.5
Total Delay (hr)	3576.4	3874.3	3647.2	3765.0	4018.4	4050.9	3822.0
Total Stops	84099	86161	82885	86468	87109	85785	85413
Fuel Used (l)	73552.9	75920.6	73494.3	75254.2	77304.4	76805.5	75388.7

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	144.5	199.9	694.8	695.5	694.6	150.0	149.9	627.7	699.5	616.9	30.7	54.3
Average Queue (m)	126.9	163.4	338.5	366.7	267.5	64.5	139.3	254.3	177.6	108.6	11.2	21.1
95th Queue (m)	177.3	242.0	719.0	771.6	596.7	158.4	171.8	599.9	498.6	349.7	23.4	43.4
Link Distance (m)			688.0	688.0	688.0			694.2	694.2	694.2		
Upstream Blk Time (%)			4	1	0			2	0	0		
Queuing Penalty (veh)			0	0	0			0	0	0		
Storage Bay Dist (m)	100.0	100.0				50.0	60.0				30.0	80.0
Storage Blk Time (%)	51	55	41		72	2	78	7		52	0	
Queuing Penalty (veh)	196	214	204		119	7	212	19		37	1	

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	80.7	81.4	49.3	41.7	336.9	334.7	86.8
Average Queue (m)	38.3	42.6	15.4	19.2	129.9	103.9	23.6
95th Queue (m)	69.6	74.5	33.6	36.6	296.9	220.5	60.2
Link Distance (m)	930.6	930.6			330.4	330.4	
Upstream Blk Time (%)					1	0	
Queuing Penalty (veh)					0	0	
Storage Bay Dist (m)			75.0	80.0			30.0
Storage Blk Time (%)	0	1			9	41	2
Queuing Penalty (veh)	0	1			10	103	12

Intersection: 9: Father Tobin Rd & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	TR
Maximum Queue (m)	25.1	99.5	29.0	73.1	78.8	161.0	37.6	42.5	119.7	138.8	120.0
Average Queue (m)	9.4	54.4	6.5	27.5	32.5	33.1	14.0	18.6	36.7	44.8	53.1
95th Queue (m)	20.7	85.7	17.8	63.4	68.5	111.3	31.9	35.9	89.6	102.9	106.7
Link Distance (m)	212.1	192.1		581.3	581.3	581.3			356.2	356.2	356.2
Upstream Blk Time (%)						0					
Queuing Penalty (veh)						0					
Storage Bay Dist (m)			30.0				40.0	30.0			
Storage Blk Time (%)			0	6		4		4	6		
Queuing Penalty (veh)			0	1		14		22	5		

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Intersection: 3: Countryside Dr & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	9.2	36.2	40.1	19.1	126.0	19.8	28.1	9.2	46.2	109.9	110.8	90.0
Average Queue (m)	0.9	14.3	20.0	6.9	67.2	7.6	12.9	2.2	18.4	62.2	62.8	30.5
95th Queue (m)	5.1	29.3	35.4	15.6	111.6	18.5	23.6	8.3	36.7	102.9	100.7	69.4
Link Distance (m)		1247.1	1247.1			1314.4	1314.4			356.2	356.2	356.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0			30.0	60.0			30.0	105.0			
Storage Blk Time (%)		2	4	0	16		0			1		4
Queuing Penalty (veh)		0	2	0	11		0			0		11

Intersection: 3: Countryside Dr & Dixie Rd

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	TR
Maximum Queue (m)	53.7	20.9	118.3	118.8	113.0
Average Queue (m)	21.6	6.7	64.1	66.2	71.1
95th Queue (m)	41.5	16.6	109.4	108.8	109.9
Link Distance (m)			275.8	275.8	275.8
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	30.0	80.0			
Storage Blk Time (%)	2		4		
Queuing Penalty (veh)	6		1		

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Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	92.4	139.9	498.4	498.3	496.2	90.0	84.9	114.9	287.1	282.8	280.0	90.0
Average Queue (m)	81.9	116.2	351.8	386.9	258.1	67.7	82.9	114.1	270.5	252.4	150.7	34.2
95th Queue (m)	109.4	170.3	623.5	647.2	527.4	109.2	89.1	119.9	322.1	345.7	310.3	84.8
Link Distance (m)			490.7	490.7	490.7				273.5	273.5	273.5	
Upstream Blk Time (%)			2	2	1				52	2	1	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	45.0	45.0				30.0	55.0	55.0				30.0
Storage Blk Time (%)	79	82	35		50	24	92	95	18		44	2
Queuing Penalty (veh)	541	560	133		232	165	506	524	59		94	12

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	110.5	143.4	137.7	111.4	65.4	114.8	452.1	468.0	463.8	115.0
Average Queue (m)	77.0	71.0	72.5	75.1	21.1	71.7	291.7	322.2	340.8	107.0
95th Queue (m)	132.4	130.8	118.4	108.3	51.6	130.2	514.5	531.1	535.9	136.8
Link Distance (m)		640.1	640.1	640.1			450.5	450.5	450.5	
Upstream Blk Time (%)							3	4	8	
Queuing Penalty (veh)							20	26	56	
Storage Bay Dist (m)	70.0				60.0	70.0				70.0
Storage Blk Time (%)	42	3		21	0	15	61		61	28
Queuing Penalty (veh)	144	5		29	1	64	98		348	116

Intersection: 15: Octillo Blvd & Dixie Rd

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	T	R	L	T	T	T
Maximum Queue (m)	59.7	84.1	65.1	81.4	92.5	34.5	46.4	130.3	151.3	165.2
Average Queue (m)	35.9	15.4	16.7	22.2	30.7	3.4	11.9	41.5	53.4	64.6
95th Queue (m)	57.5	56.1	48.6	61.5	75.7	18.7	31.5	100.7	121.5	138.9
Link Distance (m)		432.9	450.5	450.5	450.5			581.3	581.3	581.3
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	30.0					20.0	35.0			
Storage Blk Time (%)	20	0			11	0	0	8		
Queuing Penalty (veh)	15	0			6	0	2	5		

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Intersection: 17: Springtown Trail & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	T	R	L	T	T
Maximum Queue (m)	13.4	21.9	34.3	19.1	10.0	60.1	68.2	80.2	25.2	35.6	261.9	247.9
Average Queue (m)	3.4	6.5	9.7	3.5	1.5	18.2	21.5	28.9	2.0	2.1	67.0	66.4
95th Queue (m)	11.1	17.4	25.2	12.5	6.8	48.4	55.7	66.1	13.0	21.2	227.3	219.0
Link Distance (m)		148.9	642.4			322.2	322.2	322.2			640.1	640.1
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	25.0			10.0	25.0				20.0	30.0		
Storage Blk Time (%)	0	0	30	3		4		9	0		18	
Queuing Penalty (veh)	0	0	4	1		0		2	0		1	

Intersection: 17: Springtown Trail & Dixie Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	246.9	21.6
Average Queue (m)	71.2	1.2
95th Queue (m)	218.0	13.0
Link Distance (m)	640.1	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		20.0
Storage Blk Time (%)	19	0
Queuing Penalty (veh)	2	0

Queuing and Blocking Report
 2021 FT Traffic, AM Peak Hour WImp.

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Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	69.0	180.1	204.8	79.9	316.8	282.9	49.0	78.7	88.1	97.3	23.2	79.9
Average Queue (m)	20.3	55.9	77.5	70.4	158.6	56.9	17.2	34.2	40.1	45.3	2.8	42.1
95th Queue (m)	46.6	204.6	221.7	93.6	359.5	169.5	43.5	75.7	85.4	90.9	15.5	93.0
Link Distance (m)		312.9	312.9		311.7	311.7		584.5	584.5	584.5		
Upstream Blk Time (%)		5	6		29	0						
Queuing Penalty (veh)		0	0		0	0						
Storage Bay Dist (m)	50.0			60.0			35.0				55.0	50.0
Storage Blk Time (%)	1	2		62	0		7	13		11		1
Queuing Penalty (veh)	1	2		87	1		24	8		2		5

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	307.4	307.3	302.7	99.5
Average Queue (m)	161.3	158.5	157.8	15.4
95th Queue (m)	343.4	332.0	325.6	66.3
Link Distance (m)	322.2	322.2	322.2	
Upstream Blk Time (%)	12	7	7	
Queuing Penalty (veh)	82	50	48	
Storage Bay Dist (m)				50.0
Storage Blk Time (%)	55		36	
Queuing Penalty (veh)	67		15	

Queuing and Blocking Report
 2021 FT Traffic, AM Peak Hour WImp.

15/08/2009

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	64.0	179.8	1035.1	1034.4	1035.5	195.0	134.8	164.9	1338.8	1338.2	1339.4	163.8
Average Queue (m)	34.0	72.9	1020.2	1020.2	1020.6	87.9	132.9	163.3	1069.3	1006.4	832.4	24.9
95th Queue (m)	68.4	179.0	1076.6	1072.0	1069.1	220.7	141.1	176.4	1743.7	1707.9	1665.3	95.1
Link Distance (m)			1020.4	1020.4	1020.4				1328.1	1328.1	1328.1	
Upstream Blk Time (%)			45	40	42				51	10	5	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	135.0	135.0				150.0	105.0	105.0				105.0
Storage Blk Time (%)			51		53		95	96	8		19	
Queuing Penalty (veh)			101		109		677	686	26		27	

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	32.1	81.8	77.4	84.1	38.3	170.0	593.0	605.7	612.0	82.6
Average Queue (m)	12.8	43.3	47.2	53.8	15.3	169.5	524.5	462.0	337.5	27.3
95th Queue (m)	25.0	89.4	71.1	79.7	29.8	173.9	714.2	708.5	679.2	58.0
Link Distance (m)		346.7	346.7	346.7			584.5	584.5	584.5	
Upstream Blk Time (%)							41	8	1	
Queuing Penalty (veh)							314	60	6	
Storage Bay Dist (m)	65.0				65.0	70.0				70.0
Storage Blk Time (%)		2		5		90	15		26	0
Queuing Penalty (veh)		1		6		487	56		59	1

Intersection: 25: Northcliffe St & Dixie Rd

Movement	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	T	TR
Maximum Queue (m)	38.2	35.7	14.1	5.6	9.2	10.7	7.4	4.5	6.0
Average Queue (m)	16.0	15.2	2.9	0.2	0.3	1.2	0.3	0.2	0.3
95th Queue (m)	28.9	26.8	9.9	2.9	3.5	6.3	4.0	2.4	3.2
Link Distance (m)	218.5	96.7		377.0	377.0		346.7	346.7	346.7
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)			30.0			30.0			
Storage Blk Time (%)									
Queuing Penalty (veh)									

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Intersection: 28: North Park Dr & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	50.0	37.4	43.5	80.4	63.0	68.8	27.0	45.6	54.3	64.7	42.2	37.9
Average Queue (m)	20.2	19.8	26.4	40.7	33.9	39.7	8.7	13.9	18.1	23.8	8.1	13.0
95th Queue (m)	41.3	34.0	40.4	69.0	54.7	60.7	20.5	37.1	44.1	51.8	28.8	28.8
Link Distance (m)		174.1	174.1		341.5	341.5		407.7	407.7	407.7		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			45.0			55.0				30.0	65.0
Storage Blk Time (%)	3	0		12	2		0		7		0	
Queuing Penalty (veh)	4	0		25	4		0		4		0	

Intersection: 28: North Park Dr & Dixie Rd

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (m)	80.0	89.8	105.5
Average Queue (m)	38.0	45.6	52.8
95th Queue (m)	91.2	102.1	110.6
Link Distance (m)	377.0	377.0	377.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)	3		
Queuing Penalty (veh)	4		

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Intersection: 31: Williams Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	84.8	368.4	370.6	90.0	79.9	660.3	651.6	67.0	34.7	52.4	60.1	68.9
Average Queue (m)	26.4	362.6	362.5	47.7	79.8	581.0	509.7	8.0	16.3	31.0	33.8	41.2
95th Queue (m)	71.3	366.9	366.8	101.8	80.1	796.5	808.1	30.1	36.1	48.5	54.0	63.3
Link Distance (m)		357.8	357.8			644.2	644.2			327.0	327.0	327.0
Upstream Blk Time (%)		41	42			60	5					
Queuing Penalty (veh)		0	0			0	0					
Storage Bay Dist (m)	35.0			30.0	50.0			30.0	80.0			
Storage Blk Time (%)	2	58	59	9	93	7	27	0				26
Queuing Penalty (veh)	19	48	111	69	387	19	17	0				29

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	T	T	T	R
Maximum Queue (m)	41.4	76.1	146.1	162.0	170.7	45.0
Average Queue (m)	16.5	22.8	88.5	100.2	110.4	17.2
95th Queue (m)	34.8	50.8	142.4	157.0	168.0	45.6
Link Distance (m)			244.0	244.0	244.0	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	30.0	45.0				20.0
Storage Blk Time (%)	3	1	23		46	2
Queuing Penalty (veh)	6	6	34		65	15

Intersection: 34: Northampton St & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	48.5	64.0	30.1	57.1	62.4	68.6	35.4	11.0	102.1	113.3	125.6	29.3
Average Queue (m)	23.8	29.1	10.9	21.7	24.6	30.3	5.6	1.3	46.1	53.5	63.3	2.2
95th Queue (m)	43.9	51.1	24.0	52.5	58.5	63.7	21.9	6.8	93.2	108.1	119.4	16.0
Link Distance (m)	154.2	228.4		244.0	244.0	244.0			407.7	407.7	407.7	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)			55.0				25.0	80.0				25.0
Storage Blk Time (%)				0		10	0		2			18
Queuing Penalty (veh)				0		5	0		0			4

Intersection: 37: Lascelles Blvd & Dixie Rd

Movement	EB	NB	SB	SB
Directions Served	LR	L	T	R
Maximum Queue (m)	60.3	12.2	58.0	3.1
Average Queue (m)	24.8	2.8	1.9	0.2
95th Queue (m)	47.1	9.7	44.6	2.2
Link Distance (m)	179.2		327.0	
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (m)		60.0		20.0
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 39: Howden Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	TR	L	T
Maximum Queue (m)	39.8	105.8	113.9	64.1	55.7	73.6	14.5	38.4	43.1	46.8	31.6	137.9
Average Queue (m)	9.1	53.3	60.8	28.4	24.4	40.9	3.9	12.3	15.6	22.9	15.1	86.6
95th Queue (m)	26.0	83.0	90.7	58.3	43.8	64.2	12.0	30.4	37.5	46.6	28.6	136.6
Link Distance (m)		200.8	200.8		288.2	288.2		161.3	161.3	161.3		585.6
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (m)	50.0			60.0			50.0				35.0	
Storage Blk Time (%)		9		6	0			0			0	20
Queuing Penalty (veh)		3		7	0			0			4	20

Intersection: 39: Howden Blvd & Dixie Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	151.8	158.6
Average Queue (m)	100.5	111.4
95th Queue (m)	157.5	166.1
Link Distance (m)	585.6	585.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 42: Queen St & Dixie Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	L	L
Maximum Queue (m)	189.9	747.6	749.4	750.5	199.9	199.8	249.8	787.9	790.9	790.4	62.4	61.4
Average Queue (m)	74.0	739.6	739.7	739.8	110.9	158.3	179.9	282.7	307.9	206.5	31.9	35.6
95th Queue (m)	214.3	747.9	751.0	748.9	257.6	235.6	287.7	684.6	753.8	601.7	56.7	59.9
Link Distance (m)		734.6	734.6	734.6				783.3	783.3	783.3		
Upstream Blk Time (%)		51	51	55				1	1	0		
Queuing Penalty (veh)		0	0	0				0	0	0		
Storage Bay Dist (m)	120.0				130.0	150.0	150.0				100.0	100.0
Storage Blk Time (%)		63		64		52	53	1		1		
Queuing Penalty (veh)		36		146		256	262	3		1		

Intersection: 42: Queen St & Dixie Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	41.0	169.1	171.0	42.8	60.0	89.8	182.7	180.3	182.9	165.0
Average Queue (m)	21.8	28.7	35.0	7.6	28.7	52.9	167.9	169.1	171.5	89.5
95th Queue (m)	35.6	97.3	102.6	27.9	49.2	100.6	202.2	198.4	197.9	204.7
Link Distance (m)	406.0	406.0	406.0				171.6	171.6	171.6	
Upstream Blk Time (%)		0	0				41	43	41	
Queuing Penalty (veh)		0	0				348	361	349	
Storage Bay Dist (m)				80.0	65.0	65.0				65.0
Storage Blk Time (%)					0	0	56		65	1
Queuing Penalty (veh)					1	2	182		186	7

Intersection: 45: Hazelwood Dr & Dixie Rd

Movement	EB	NB	SB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (m)	28.5	11.9	16.1	17.5	23.6
Average Queue (m)	8.0	1.6	1.1	1.6	2.8
95th Queue (m)	20.8	7.2	14.1	15.4	21.4
Link Distance (m)	159.1		161.3	161.3	161.3
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)		50.0			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 47: Hillside Dr & Dixie Rd

Movement	EB	NB	SB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (m)	147.6	32.2	270.1	281.3	286.6
Average Queue (m)	100.5	8.1	141.4	148.3	159.2
95th Queue (m)	192.7	21.7	311.9	323.4	334.6
Link Distance (m)	143.0		318.2	318.2	318.2
Upstream Blk Time (%)	53		1	1	2
Queuing Penalty (veh)	0		8	12	16
Storage Bay Dist (m)		40.0			
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Network Summary

Network wide Queuing Penalty: 11071

Summary of All Intervals

Run Number	1	2	3	4	5	Avg	
Start Time	5:45	5:45	5:45	5:45	5:45	5:45	
End Time	7:00	7:00	7:00	7:00	7:00	7:00	
Total Time (min)	75	75	75	75	75	75	
Time Recorded (min)	60	60	60	60	60	60	
# of Intervals	2	2	2	2	2	2	
# of Recorded Intvl	1	1	1	1	1	1	
Vehs Entered	28659	28421	28449	28086	27801	28531	28325
Vehs Exited	27357	27212	26979	26854	26673	27257	27059
Starting Vehs	2034	2132	2142	2126	2151	2118	2104
Ending Vehs	3336	3341	3612	3358	3279	3392	3373
Denied Entry Before	144	240	88	212	149	115	154
Denied Entry After	3711	3771	3853	4175	4278	3804	3931
Travel Distance (km)	50976	50607	50782	50470	49882	51154	50645
Travel Time (hr)	4425.0	4653.4	4603.0	4701.1	4681.8	4574.6	4606.5
Total Delay (hr)	3553.7	3788.2	3735.0	3837.8	3829.7	3700.8	3740.9
Total Stops	91707	96729	96903	92794	91830	96443	94399
Fuel Used (l)	73169.5	74522.4	74415.5	74983.1	74422.1	74351.5	74310.7

Interval #0 Information Seeding

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	6:00
End Time	7:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg	
Vehs Entered	28659	28421	28449	28086	27801	28531	28325
Vehs Exited	27357	27212	26979	26854	26673	27257	27059
Starting Vehs	2034	2132	2142	2126	2151	2118	2104
Ending Vehs	3336	3341	3612	3358	3279	3392	3373
Denied Entry Before	144	240	88	212	149	115	154
Denied Entry After	3711	3771	3853	4175	4278	3804	3931
Travel Distance (km)	50976	50607	50782	50470	49882	51154	50645
Travel Time (hr)	4425.0	4653.4	4603.0	4701.1	4681.8	4574.6	4606.5
Total Delay (hr)	3553.7	3788.2	3735.0	3837.8	3829.7	3700.8	3740.9
Total Stops	91707	96729	96903	92794	91830	96443	94399
Fuel Used (l)	73169.5	74522.4	74415.5	74983.1	74422.1	74351.5	74310.7

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Intersection: 6: Mayfield Rd & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	
Directions Served	L	L	T	T	T	R	L	T	T	T	T	R	L
Maximum Queue (m)	149.9	199.8	693.6	693.8	639.7	90.0	149.9	634.0	635.8	553.5	130.0	170.0	
Average Queue (m)	129.8	151.9	241.3	221.6	184.3	31.6	131.5	205.8	226.3	234.9	68.4	156.2	
95th Queue (m)	173.3	221.3	553.3	506.3	437.8	80.1	180.2	394.7	434.7	432.8	159.1	196.9	
Link Distance (m)			688.0	688.0	688.0			694.2	694.2	694.2			
Upstream Blk Time (%)			3	0	0			0	0	0			
Queuing Penalty (veh)			0	0	0			0	0	0			
Storage Bay Dist (m)	100.0	100.0				50.0	60.0				30.0	80.0	
Storage Blk Time (%)	59	70	29		24	0	2	58		65	2	77	
Queuing Penalty (veh)	256	303	131		67	0	13	72		62	13	231	

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	T	T	R
Maximum Queue (m)	496.8	460.8	37.2	95.0	334.8	140.7	89.8
Average Queue (m)	236.7	175.9	14.6	45.1	51.5	45.1	72.5
95th Queue (m)	546.0	422.3	29.4	85.9	160.5	98.2	98.4
Link Distance (m)	929.0	929.0			330.4	330.4	
Upstream Blk Time (%)					0	0	
Queuing Penalty (veh)					0	0	
Storage Bay Dist (m)			75.0	80.0			30.0
Storage Blk Time (%)	0	1		4	0	15	34
Queuing Penalty (veh)	0	2		6	0	86	58

Intersection: 9: Father Tobin Rd & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	TR
Maximum Queue (m)	23.2	46.7	13.3	53.1	50.6	48.2	5.9	10.1	42.6	43.9	48.5
Average Queue (m)	8.0	23.4	3.0	15.1	15.6	12.6	0.6	1.1	13.4	12.3	17.5
95th Queue (m)	18.4	40.0	10.0	41.6	41.1	35.5	4.2	5.9	33.0	32.9	40.2
Link Distance (m)	212.1	192.1		581.3	581.3	581.3			356.5	356.5	356.5
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)			30.0				40.0	30.0			
Storage Blk Time (%)				2		1			1		
Queuing Penalty (veh)				0		0			0		

Intersection: 3: Countryside Dr & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	71.5	466.1	77.7	37.4	85.6	906.4	294.9	80.9	34.1	91.1	92.7	75.0
Average Queue (m)	30.4	57.3	47.8	8.6	37.0	87.8	62.5	20.1	11.7	46.5	48.7	25.7
95th Queue (m)	60.4	267.8	68.8	21.9	73.0	431.9	219.1	54.3	25.2	78.5	80.0	57.6
Link Distance (m)		1249.4	1249.4			1314.4	1314.4			356.5	356.5	356.5
Upstream Blk Time (%)		0				0	0					
Queuing Penalty (veh)		0				0	0					
Storage Bay Dist (m)	30.0			30.0	60.0			30.0	105.0			
Storage Blk Time (%)	8	22	30	0	3	4	34	0		0		2
Queuing Penalty (veh)	24	24	18	0	9	5	50	0		0		3

Intersection: 3: Countryside Dr & Dixie Rd

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	TR
Maximum Queue (m)	28.2	67.9	46.8	51.6	59.8
Average Queue (m)	10.5	35.9	21.5	22.2	32.6
95th Queue (m)	22.7	61.5	41.0	41.8	55.8
Link Distance (m)			277.5	277.5	277.5
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (m)	30.0	80.0			
Storage Blk Time (%)	0	0			
Queuing Penalty (veh)	1	0			

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	92.4	139.9	498.8	503.9	502.2	90.0	84.9	114.9	358.5	356.8	358.4	90.0
Average Queue (m)	89.7	139.0	461.5	455.9	449.2	32.9	73.9	109.3	349.0	348.4	346.0	29.3
95th Queue (m)	98.5	142.6	612.6	613.6	615.8	90.3	104.8	138.2	386.1	383.7	400.1	86.9
Link Distance (m)			490.7	490.7	490.7				348.1	348.1	348.1	
Upstream Blk Time (%)			74	47	34				65	45	44	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	45.0	45.0				30.0	55.0	55.0				30.0
Storage Blk Time (%)	94	95	28		49	0	73	74	46		60	0
Queuing Penalty (veh)	632	637	98		97	3	522	529	100		54	2

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	119.9	648.0	621.3	614.7	61.4	106.9	246.5	165.7	96.6	97.2
Average Queue (m)	119.6	487.3	291.7	206.7	31.5	87.4	116.2	43.4	31.2	52.6
95th Queue (m)	123.0	760.7	644.6	568.3	55.8	144.5	294.4	143.6	73.6	84.6
Link Distance (m)		640.1	640.1	640.1			450.2	450.2	450.2	
Upstream Blk Time (%)		22	0	0						
Queuing Penalty (veh)		112	1	1						
Storage Bay Dist (m)	70.0				60.0	70.0				70.0
Storage Blk Time (%)	86	0		5	0	56				2
Queuing Penalty (veh)	231	0		15	1	59				2

Intersection: 15: Octillo Blvd & Dixie Rd

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	T	R	L	T	T	T
Maximum Queue (m)	56.6	44.0	51.5	54.3	58.3	35.4	45.3	42.2	45.8	55.2
Average Queue (m)	30.8	11.7	16.2	16.1	21.2	9.1	17.1	16.4	17.2	22.3
95th Queue (m)	52.6	35.4	39.4	41.0	46.3	24.0	34.5	34.7	35.1	43.2
Link Distance (m)		432.9	450.2	450.2	450.2			581.3	581.3	581.3
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	30.0					20.0	35.0			
Storage Blk Time (%)	10	0			7	0	2	1		
Queuing Penalty (veh)	6	0			12	1	6	1		

Intersection: 17: Springtown Trail & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	T	R	L	T	T
Maximum Queue (m)	24.5	16.7	23.0	15.7	66.2	203.3	174.6	125.2	23.8	12.3	33.2	29.0
Average Queue (m)	5.6	4.8	8.1	3.9	11.2	56.3	46.4	37.6	3.7	1.9	9.2	6.8
95th Queue (m)	18.3	13.1	18.8	12.5	47.1	179.1	152.8	102.3	18.4	8.1	25.6	20.7
Link Distance (m)		148.9	642.4			320.6	320.6	320.6			640.1	640.1
Upstream Blk Time (%)						1	0					
Queuing Penalty (veh)						5	0					
Storage Bay Dist (m)	25.0			10.0	25.0				20.0	30.0		
Storage Blk Time (%)	3	0	28	8	0	27		9	0		0	
Queuing Penalty (veh)	1	0	4	2	0	15		6	0		0	

Intersection: 17: Springtown Trail & Dixie Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	32.0	9.0
Average Queue (m)	10.4	0.7
95th Queue (m)	27.1	4.3
Link Distance (m)	640.1	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		20.0
Storage Blk Time (%)	2	
Queuing Penalty (veh)	1	

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	33.6	51.5	62.6	66.4	57.9	63.0	38.0	50.2	49.7	51.8	14.8	32.2
Average Queue (m)	15.2	27.3	38.4	30.0	29.4	38.1	16.5	18.1	17.5	22.7	5.6	14.8
95th Queue (m)	28.2	45.2	57.7	56.1	48.9	55.8	30.6	40.5	39.4	44.5	13.9	29.9
Link Distance (m)		308.3	308.3		303.6	303.6		582.9	582.9	582.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	50.0			60.0			35.0				55.0	50.0
Storage Blk Time (%)		0		2	0		1	3		0		0
Queuing Penalty (veh)		0		3	0		4	6		1		0

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	58.5	51.3	52.0	11.3
Average Queue (m)	28.6	23.5	25.2	2.8
95th Queue (m)	53.6	46.0	48.1	9.6
Link Distance (m)	320.6	320.6	320.6	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				50.0
Storage Blk Time (%)	1		0	
Queuing Penalty (veh)	0		0	

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	157.4	179.9	1029.5	1031.2	1032.0	195.0	134.9	164.9	1338.7	1337.2	1335.7	165.0
Average Queue (m)	147.0	166.9	660.3	620.4	574.2	129.6	91.9	163.5	1012.9	1028.5	1009.5	159.8
95th Queue (m)	177.1	208.0	1279.8	1221.6	1157.6	246.4	173.2	167.8	1608.0	1587.8	1571.8	184.7
Link Distance (m)			1020.4	1020.4	1020.4				1328.1	1328.1	1328.1	
Upstream Blk Time (%)			36	13	13				23	18	18	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	135.0	135.0				150.0	105.0	105.0				105.0
Storage Blk Time (%)	57	78	64		11	2	1	39	70		64	17
Queuing Penalty (veh)	297	404	248		15	11	6	262	144		243	112

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	43.2	103.4	111.6	112.6	66.2	151.1	170.6	104.8	60.8	46.4
Average Queue (m)	19.1	64.9	65.6	69.4	19.0	102.2	61.7	32.2	35.7	19.0
95th Queue (m)	36.5	95.8	97.9	99.7	53.1	181.2	183.5	74.5	54.9	37.4
Link Distance (m)		346.7	346.7	346.7			582.9	582.9	582.9	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	65.0				65.0	70.0				70.0
Storage Blk Time (%)		13		18		44			0	
Queuing Penalty (veh)		20		23		73			0	

Intersection: 25: Northcliffe St & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	T	TR	L	TR
Maximum Queue (m)	22.0	32.5	20.3	3.7	3.0	6.2	14.4	5.6
Average Queue (m)	10.0	13.5	6.0	0.1	0.1	0.4	3.1	0.3
95th Queue (m)	19.1	25.0	16.2	2.9	1.7	3.8	10.4	2.4
Link Distance (m)	218.5	96.7		377.0	377.0	377.0		346.7
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			30.0				30.0	
Storage Blk Time (%)			0					
Queuing Penalty (veh)			0					

Intersection: 28: North Park Dr & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	67.9	78.5	71.9	63.8	71.7	76.8	48.6	97.4	93.0	97.9	69.9	46.0
Average Queue (m)	38.1	29.6	38.1	30.8	38.5	47.0	19.6	48.0	50.3	53.6	17.3	19.4
95th Queue (m)	68.0	61.2	61.0	54.6	61.8	69.2	38.2	90.7	93.9	96.8	48.5	36.1
Link Distance (m)		174.1	174.1		341.5	341.5		407.7	407.7	407.7		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			45.0			55.0				30.0	65.0
Storage Blk Time (%)	24	1		5	4		0	8		20	0	
Queuing Penalty (veh)	31	1		9	5		1	11		37	2	

Intersection: 28: North Park Dr & Dixie Rd

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (m)	42.6	54.2	60.8
Average Queue (m)	19.7	24.6	31.4
95th Queue (m)	38.9	46.6	54.5
Link Distance (m)	377.0	377.0	377.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Queuing and Blocking Report
2021 FT, PM Peak Hour WImp

15/08/2009

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	84.9	362.4	362.0	88.9	79.9	653.8	652.9	90.0	70.5	92.6	103.5	117.9
Average Queue (m)	78.2	214.6	192.0	18.4	55.9	588.3	574.7	54.3	33.8	64.5	69.9	77.1
95th Queue (m)	101.5	418.1	388.5	50.3	97.4	785.8	788.4	115.0	57.8	92.7	100.3	111.1
Link Distance (m)		357.8	357.8			644.2	644.2			327.0	327.0	327.0
Upstream Blk Time (%)		17	7			36	32					
Queuing Penalty (veh)		0	0			0	0					
Storage Bay Dist (m)	35.0			30.0	50.0			30.0	80.0			
Storage Blk Time (%)	81	23	35	1	6	56	60	6	0	3		43
Queuing Penalty (veh)	287	52	60	2	40	114	106	37	1	9		54

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	T	T	T	R
Maximum Queue (m)	89.9	91.4	140.3	138.8	100.2	45.0
Average Queue (m)	21.6	67.4	77.5	60.1	48.3	24.4
95th Queue (m)	65.8	123.9	198.3	151.8	79.2	50.4
Link Distance (m)			244.0	244.0	244.0	
Upstream Blk Time (%)			2	0		
Queuing Penalty (veh)			7	0		
Storage Bay Dist (m)	30.0	45.0				20.0
Storage Blk Time (%)	0	55	4		39	6
Queuing Penalty (veh)	2	122	5		47	12

Intersection: 34: Northampton St & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	46.1	48.0	32.8	98.6	104.6	117.7	69.6	12.2	46.1	47.5	60.8	39.5
Average Queue (m)	17.4	21.8	16.6	54.8	60.5	66.4	15.4	2.4	21.6	22.7	29.8	5.5
95th Queue (m)	34.9	41.0	29.6	99.2	105.6	115.6	53.3	9.0	42.0	44.3	53.3	21.7
Link Distance (m)	154.2	231.3		244.0	244.0	244.0			407.7	407.7	407.7	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)			55.0				25.0	80.0				25.0
Storage Blk Time (%)				7		18	0				9	0
Queuing Penalty (veh)				9		21	0				5	0

Intersection: 37: Lascelles Blvd & Dixie Rd

Movement	EB	NB	SB	SB
Directions Served	LR	L	T	R
Maximum Queue (m)	27.8	24.4	1.1	9.2
Average Queue (m)	11.5	9.1	0.0	0.7
95th Queue (m)	21.3	20.7	0.9	4.6
Link Distance (m)	179.2		327.0	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		60.0		20.0
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 39: Howden Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	TR	L	T
Maximum Queue (m)	32.6	47.8	56.6	84.0	86.5	91.1	55.9	101.7	110.1	113.8	35.9	61.4
Average Queue (m)	14.8	21.5	32.8	45.9	37.7	47.9	22.0	56.2	61.4	68.0	15.0	28.4
95th Queue (m)	29.0	39.5	52.9	82.8	73.2	74.7	43.0	101.8	110.5	116.6	29.4	55.9
Link Distance (m)		200.8	200.8		288.2	288.2		161.3	161.3	161.3		585.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	50.0			60.0			50.0				35.0	
Storage Blk Time (%)		0		9	1		1	13			1	5
Queuing Penalty (veh)		0		14	1		4	23			2	4

Intersection: 39: Howden Blvd & Dixie Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	71.9	79.9
Average Queue (m)	35.1	43.7
95th Queue (m)	65.8	75.3
Link Distance (m)	585.6	585.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 42: Queen St & Dixie Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	R	L
Maximum Queue (m)	190.0	745.8	749.8	750.7	197.0	199.9	249.9	799.2	799.4	800.5	230.0	119.2
Average Queue (m)	188.6	675.0	654.7	635.3	58.3	118.5	243.5	790.1	788.9	788.7	191.6	76.0
95th Queue (m)	198.8	919.9	935.5	950.3	180.5	229.2	266.0	796.1	796.2	796.4	298.9	126.0
Link Distance (m)		734.6	734.6	734.6				783.3	783.3	783.3		
Upstream Blk Time (%)		70	29	31				51	39	40		
Queuing Penalty (veh)		0	0	0				0	0	0		
Storage Bay Dist (m)	120.0				130.0	150.0	150.0				130.0	100.0
Storage Blk Time (%)	90	8		5	2	0	5	60		61	0	15
Queuing Penalty (veh)	515	27		21	9	4	43	227		131	3	89

Intersection: 42: Queen St & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	149.9	410.8	413.3	411.4	180.0	77.3	89.8	177.6	152.5	105.5	32.9
Average Queue (m)	128.6	408.9	384.3	370.5	88.0	72.7	84.6	145.3	70.1	63.1	6.9
95th Queue (m)	189.3	420.6	443.7	434.6	218.6	89.1	104.5	221.6	129.7	92.0	25.3
Link Distance (m)		406.0	406.0	406.0				171.6	171.6	171.6	
Upstream Blk Time (%)		32	3	3				54	1		
Queuing Penalty (veh)		0	0	0				204	2		
Storage Bay Dist (m)	100.0				80.0	65.0	65.0				65.0
Storage Blk Time (%)	17	70		74		71	86	2		10	
Queuing Penalty (veh)	105	366		181		191	232	3		16	

Intersection: 45: Hazelwood Dr & Dixie Rd

Movement	EB	NB	SB	SB
Directions Served	LR	L	T	TR
Maximum Queue (m)	12.3	10.1	1.5	1.4
Average Queue (m)	2.5	1.7	0.1	0.0
95th Queue (m)	9.4	7.2	1.2	1.1
Link Distance (m)	159.1		161.3	161.3
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		50.0		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 47: Hillside Dr & Dixie Rd

Movement	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LR	L	T	T	T	T	T	TR
Maximum Queue (m)	129.9	34.4	16.2	13.3	25.7	235.7	217.8	134.4
Average Queue (m)	45.6	13.5	0.9	0.7	1.0	85.0	53.9	16.5
95th Queue (m)	127.1	28.5	8.1	5.8	10.4	235.6	196.5	109.2
Link Distance (m)	143.0		171.6	171.6	171.6	318.2	318.2	318.2
Upstream Blk Time (%)	13					0	0	0
Queuing Penalty (veh)	0					1	0	0
Storage Bay Dist (m)		40.0						
Storage Blk Time (%)		0						
Queuing Penalty (veh)		1						

Network Summary

Network wide Queuing Penalty: 9971

Appendix J

2031 Future Conditions –
Traffic Signal Warrant Analysis

Dixie Road at Northcliff Street Intersection

Results Sheet

[Input Sheet](#)

[Analysis Sheet](#)

[Proposed Collision](#)

[GO TO Justification:](#)

Intersection: Dixie Road/ Moregate-Northcliff Street

Count Date: 2031 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	83	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	85	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	83	%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B Justification 2	85	%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. 4-Hr Volume		81	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis Sheet

[Input Sheet](#)

[Results Sheet](#)

[Proposed Collision](#)

GO TO Justification:

Intersection: Dixie Road/ Moregate-Northcliff Street

Count Date: 2031 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
1A	480	720	600	900	2,451	2,666	1,617	1,584	1,805	2,456	2,947	3,288				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
1B	120	170	120	170	271	276	128	95	95	131	170	167				
	COMPLIANCE %				100	100	75	56	56	77	100	98	662	83		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
2A	480	720	600	900	2,180	2,390	1,489	1,489	1,710	2,325	2,777	3,121				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
2B	50	75	50	75	123	137	53	49	49	60	80	71				
	COMPLIANCE %				100	100	71	65	65	80	100	95	676	85		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	JUSTIFIED	

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	2,390	154	115	100 %	81 %
	16:00	2,325	69	115	60 %	
	17:00	2,777	100	115	87 %	
	18:00	3,121	90	115	78 %	

Input Data Sheet

[Analysis Sheet](#)

[Results Sheet](#)

[Proposed Collision](#)

GO TO Justification:

What are the intersecting roadways?

Dixie Road/ Moregate-Northcliff Street

What is the direction of the Main Road street?

North-South

When was the data collected?

2031 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

4

d.- What is the operating environment?

Urban

Population >= 10,000

AND

Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	19	576	31	27	2	113	17	1,512	25	94	0	35	
9:00	33	708	22	35	0	119	22	1,578	27	96	6	20	
12:00	42	598	28	22	0	55	28	765	28	28	3	20	
13:00	28	719	20	9	2	27	25	666	31	35	5	17	
14:00	36	856	31	17	2	30	31	739	17	27	5	14	
16:00	47	1,300	42	25	5	39	24	871	41	27	8	27	
17:00	71	1,680	83	22	2	46	25	885	33	55	3	42	
18:00	91	1,964	86	20	2	55	28	925	27	49	2	39	
Total	367	8,401	343	177	15	484	200	7,941	229	411	32	214	0

Dixie Road at Lascelles Boulevard Intersection

Results Sheet

[Input Sheet](#)

[Analysis Sheet](#)

[Proposed Collision](#)

[GO TO Justification:](#)

Intersection: Dixie Road/ Lascelles Blvd

Count Date: 2031 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	40	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	45	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	40	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	45	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		79	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Lascelles Blvd

Count Date: 2031 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
1A	480	720	600	900	2,972	3,072	1,499	1,599	1,511	2,990	2,978	3,124				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
1B	180	255	180	255	233	143	72	69	57	81	78	91				
	COMPLIANCE %				91	56	28	27	22	32	31	36	323	40		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
2A	480	720	600	900	2,739	2,929	1,427	1,530	1,454	2,909	2,900	3,033				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
2B	50	75	50	75	56	71	27	26	18	22	27	24				
	COMPLIANCE %				75	95	36	35	24	29	36	32	361	45		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	2,929	143	115	100 %	79 %
	16:00	2,909	81	115	70 %	
	17:00	2,900	78	115	68 %	
	18:00	3,033	91	115	79 %	

Input Data Sheet

Analysis Sheet

Results Sheet

Proposed Collision

GO TO Justification:

What are the intersecting roadways?

Dixie Road/ Lascelles Blvd

What is the direction of the Main Road street?

North-South

When was the data collected?

2031 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

3

d.- What is the operating environment?

Urban

Population >= 10,000

AND

Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	14	628		56		177		2,076	21				
9:00	24	657		71		72		2,174	74				
12:00	16	606		27		45		765	40				
13:00	34	697		26		43		752	47				
14:00	40	715		18		39		644	55				
16:00	112	1,807		22		59		921	69				
17:00	111	1,852		27		51		900	37				
18:00	119	1,939		24		67		919	56				
Total	470	8,901	0	271	0	553	0	9,151	399	0	0	0	0

Dixie Road at Hazelwood Road Intersection

Results Sheet

Input Sheet

Analysis Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Hazelwood Dr

Count Date: 2031 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	10	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	9	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	10	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		27	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Input Data Sheet

Analysis Sheet

Results Sheet

Proposed Collision

GO TO Justification:

What are the intersecting roadways?

Dixie Road/ Hazelwood Dr

What is the direction of the Main Road street?

North-South

When was the data collected?

2031 Future Conditions

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road?

2 or more

b.- Number of lanes on the Minor Road?

1

c.- How many approaches?

3

d.- What is the operating environment?

Urban

Population >= 10,000

AND

Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Northbound Approach			Minor Eastbound Approach			Main Southbound Approach			Minor Westbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
8:00	5	618		11		23		3,085	5				
9:00	8	623		15		39		2,827	8				
12:00	13	998		3		16		1,185	10				
13:00	6	983		5		3		1,127	13				
14:00	11	1,124		0		11		1,229	3				
16:00	21	2,079		10		13		1,404	23				
17:00	26	2,696		5		10		1,248	13				
18:00	13	2,033		11		18		1,307	32				
Total	103	11,154	0	60	0	133	0	13,412	107	0	0	0	0

Analysis Sheet

[Input Sheet](#)

[Results Sheet](#)

[Proposed Collision](#)

GO TO Justification:

Intersection: Dixie Road/ Hazelwood Dr

Count Date: 2031 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
1A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	3,747	3,520	2,225	2,137	2,378	3,550	3,998	3,414				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
1B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	180	255	180	255	34	54	19	8	11	23	15	29				
COMPLIANCE %					13	21	7	3	4	9	6	11	76	9		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fullfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
2A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
	480	720	600	900	3,713	3,466	2,206	2,129	2,367	3,527	3,983	3,385				
COMPLIANCE %					100	100	100	100	100	100	100	100	800	100		
2B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	50	75	50	75	11	15	3	5	0	10	5	11				
COMPLIANCE %					15	20	4	7	0	13	7	15	80	10		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fullfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main) X	Heaviest Minor Approach Y (actual)	Required Value Y (warrant threshold)	Average % Compliance	Overall % Compliance
Justification 4	8:00	3,713	34	115	30 %	27 %
	9:00	3,466	54	115	47 %	
	16:00	3,527	23	115	20 %	
	17:00	3,983	15	115	13 %	

Dixie Road at Hillside Drive Intersection

Results Sheet

[Input Sheet](#)

[Analysis Sheet](#)

[Proposed Collision](#)

[GO TO Justification](#)

Intersection: Dixie Road/ Hillside Street

Count Date: 2031 Future Conditions

Summary Results

Justification		Compliance		Signal Justified?	
				YES	NO
1. Minimum Vehicular Volume	A Total Volume	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Volume	28	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Delay to Cross Traffic	A Main Road	100	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Crossing Road	27	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Combination	A Justificaton 1	28	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	B Justification 2	27	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 4-Hr Volume		73	%	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Hillside Street

Count Date: 2031 Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
1A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2,595	3,512	1,995	2,185	2,238	3,498	4,105	4,471				
	480	720	600	900	100	100	100	100	100	100	100	100	800	100		
1B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	68	120	55	48	49	59	64	100				
	180	255	180	255	27	47	22	19	19	23	25	39	221	28		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
2A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2,527	3,392	1,941	2,138	2,189	3,439	4,041	4,371				
	480	720	600	900	100	100	100	100	100	100	100	100	800	100		
2B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10	16	18	9	4	16	15	97				
	50	75	50	75	13	21	24	12	5	21	20	100	217	27		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fulfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	3,392	120	115	100 %	73 %
	16:00	3,439	59	115	51 %	
	17:00	4,041	64	115	56 %	
	18:00	4,371	100	115	87 %	

Analysis Sheet

Input Sheet

Results Sheet

Proposed Collision

GO TO Justification:

Intersection: Dixie Road/ Hillside Street

Count Date: 2031-Future Conditions

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 Lanes		2 or More Lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
1A	480	720	600	900	2,595	3,512	1,996	2,186	2,238	3,498	4,105	4,471				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
1B	180	255	180	255	68	120	55	48	49	59	64	100				
	COMPLIANCE %				27	47	22	19	19	23	25	39	221	28		
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fullfilled each of 8 hours Lesser of 1A or 1B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent		
	1 lanes		2 or More lanes		Hour Ending											
Flow Condition	FREE FLOW	RESTR. FLOW	FREE FLOW	RESTR. FLOW	8:00	9:00	12:00	13:00	14:00	16:00	17:00	18:00				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
2A	480	720	600	900	2,527	3,392	1,941	2,138	2,189	3,439	4,041	4,371				
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100		
2B	50	75	50	75	10	16	18	9	4	16	15	97				
	COMPLIANCE %				13	21	24	12	5	21	20	100	217	27		
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% Fullfilled each of 8 hours Lesser of 2A or 2B at least 80% fulfilled each of 8 hours								Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Justification 3: Combination

Combination Justification 1 and 2

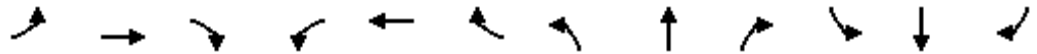
Justification Satisfied 80% or More				Two Justifications Satisfied 80% or More	
Justification 1	Minimun Vehcular Volume	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Justification 2	Delay Cross Traffic	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	NOT JUSTIFIED	

Justification 4: Four Hour Volume

Justification	Time Perled	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	3,392	120	115	100 %	73 %
	16:00	3,439	59	115	51 %	
	17:00	4,041	64	115	56 %	
	18:00	4,371	100	115	87 %	

Appendix K

2031 Future Conditions –
Intersection Capacity Analysis

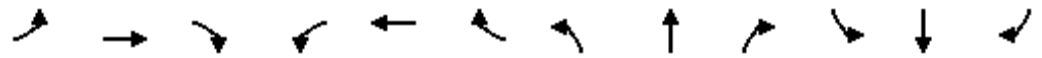


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘↗	↑↑↗	
Volume (vph)	2	144	46	312	146	19	93	1054	327	40	1619	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	5.0	6.6	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1825	3202	1633	1560	3579	1633	1547	4334	1219	3541	4467	
Flt Permitted	0.66	1.00	1.00	0.57	1.00	1.00	0.07	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1267	3202	1633	931	3579	1633	114	4334	1219	3541	4467	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	144	46	312	146	19	93	1054	327	40	1619	27
RTOR Reduction (vph)	0	0	39	0	0	13	0	0	117	0	2	0
Lane Group Flow (vph)	2	144	7	312	146	6	93	1054	210	40	1644	0
Heavy Vehicles (%)	0%	14%	0%	17%	2%	0%	18%	21%	34%	0%	17%	25%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			
Actuated Green, G (s)	19.6	18.2	18.2	43.0	38.6	38.6	66.1	57.2	57.2	5.6	55.5	
Effective Green, g (s)	19.6	18.2	18.2	43.0	38.6	38.6	66.1	57.2	57.2	5.6	55.5	
Actuated g/C Ratio	0.16	0.15	0.15	0.35	0.31	0.31	0.54	0.46	0.46	0.05	0.45	
Clearance Time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	5.0	6.6	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	208	473	241	436	1121	512	165	2012	566	161	2012	
v/s Ratio Prot	0.00	0.04		c0.13	0.04		c0.04	0.24		0.01	c0.37	
v/s Ratio Perm	0.00		0.00	c0.12		0.00	0.26		0.17			
v/c Ratio	0.01	0.30	0.03	0.72	0.13	0.01	0.56	0.52	0.37	0.25	0.82	
Uniform Delay, d1	43.6	46.9	44.9	32.7	30.3	29.2	19.7	23.4	21.4	56.8	29.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.7	0.2	6.8	0.2	0.0	7.1	1.0	1.9	1.7	3.8	
Delay (s)	43.6	48.5	45.1	39.5	30.5	29.2	26.8	24.3	23.2	58.5	33.3	
Level of Service	D	D	D	D	C	C	C	C	C	E	C	
Approach Delay (s)		47.7			36.3			24.2			33.9	
Approach LOS		D			D			C			C	

Intersection Summary

HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	123.2	Sum of lost time (s)	15.6
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑	↖	↖	↑↑	↖
Volume (vph)	530	1603	194	343	1134	75	100	695	194	131	1083	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3052	4902	1570	1615	4641	1361	3219	3544	1398	1755	3544	1498
Flt Permitted	0.95	1.00	1.00	0.12	1.00	1.00	0.95	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	3052	4902	1570	204	4641	1361	3219	3544	1398	384	3544	1498
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	530	1603	194	343	1134	75	100	695	194	131	1083	274
RTOR Reduction (vph)	0	0	75	0	0	27	0	0	139	0	0	71
Lane Group Flow (vph)	530	1603	119	343	1134	48	100	695	55	131	1083	203
Confl. Peds. (#/hr)									3	3		
Heavy Vehicles (%)	16%	7%	4%	13%	13%	20%	10%	3%	15%	4%	3%	9%
Turn Type	Prot		Perm	pm+pt		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2	6		6
Actuated Green, G (s)	23.0	39.3	39.3	52.3	33.3	33.3	4.0	34.3	34.3	43.0	37.0	37.0
Effective Green, g (s)	23.0	39.3	39.3	52.3	33.3	33.3	4.0	34.3	34.3	43.0	37.0	37.0
Actuated g/C Ratio	0.19	0.33	0.33	0.44	0.28	0.28	0.03	0.29	0.29	0.36	0.31	0.31
Clearance Time (s)	5.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	585	1605	514	312	1288	378	107	1013	400	206	1093	462
v/s Ratio Prot	0.17	c0.33		c0.17	0.24		0.03	0.20		c0.03	c0.31	
v/s Ratio Perm			0.08	c0.30		0.04			0.04	0.20		0.14
v/c Ratio	0.91	1.00	0.23	1.10	0.88	0.13	0.93	0.69	0.14	0.64	0.99	0.44
Uniform Delay, d1	47.4	40.3	29.4	35.8	41.4	32.5	57.9	38.1	31.9	28.7	41.3	33.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.6	22.1	0.5	80.3	7.9	0.3	67.7	3.8	0.7	8.6	25.1	3.0
Delay (s)	66.0	62.4	29.8	116.1	49.3	32.8	125.6	41.8	32.6	37.3	66.4	36.2
Level of Service	E	E	C	F	D	C	F	D	C	D	E	D
Approach Delay (s)		60.5			63.3			48.5			58.3	
Approach LOS		E			E			D			E	

Intersection Summary

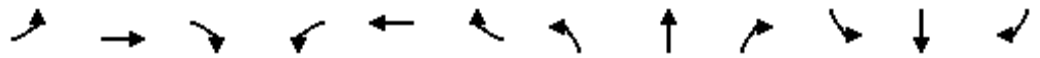
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↗	↗	↑↑↑	
Volume (vph)	20	20	20	275	25	15	30	1400	409	95	1799	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes		1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.95			0.99		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1796			1756		1825	4948	1477	1721	4938	
Flt Permitted		0.86			0.71		0.08	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1566			1303		152	4948	1477	270	4938	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	20	20	275	25	15	30	1400	409	95	1799	30
RTOR Reduction (vph)	0	11	0	0	1	0	0	0	145	0	1	0
Lane Group Flow (vph)	0	49	0	0	314	0	30	1400	264	95	1828	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	4%	0%	10%	0%	6%	8%	6%	6%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		31.8			31.8		65.8	65.8	65.8	65.8	65.8	
Effective Green, g (s)		31.8			31.8		65.8	65.8	65.8	65.8	65.8	
Actuated g/C Ratio		0.29			0.29		0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)		448			373		90	2930	875	160	2925	
v/s Ratio Prot								0.28				c0.37
v/s Ratio Perm		0.03			c0.24		0.20		0.18	0.35		
v/c Ratio		0.11			0.84		0.33	0.48	0.30	0.59	0.62	
Uniform Delay, d1		29.2			37.3		11.5	12.9	11.2	14.2	14.7	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			17.0		4.5	0.3	0.4	8.6	0.6	
Delay (s)		29.4			54.3		16.0	13.1	11.7	22.9	15.3	
Level of Service		C			D		B	B	B	C	B	
Approach Delay (s)		29.4			54.3			12.9			15.6	
Approach LOS		C			D			B			B	

Intersection Summary

HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	111.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖	↑↑↑	↖
Volume (vph)	452	2399	550	394	1945	249	191	1100	162	187	1395	669
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.91	1.00	1.00	0.94	1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	5142	1478	3340	5092	1512	1674	4948	1379	1788	4948	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	3437	5142	1478	3340	5092	1512	220	4948	1379	235	4948	1538
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	452	2399	550	394	1945	249	191	1100	162	187	1395	669
RTOR Reduction (vph)	0	0	93	0	0	52	0	0	107	0	0	7
Lane Group Flow (vph)	452	2399	457	394	1945	197	191	1100	55	187	1395	662
Confl. Peds. (#/hr)	45		63	63		45	28		50	50		28
Heavy Vehicles (%)	3%	2%	1%	6%	3%	1%	9%	6%	10%	2%	6%	3%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	16.0	47.3	47.3	11.0	42.3	42.3	39.0	32.0	32.0	39.0	32.0	48.0
Effective Green, g (s)	16.0	47.3	47.3	11.0	42.3	42.3	39.0	32.0	32.0	39.0	32.0	48.0
Actuated g/C Ratio	0.13	0.39	0.39	0.09	0.35	0.35	0.32	0.27	0.27	0.32	0.27	0.40
Clearance Time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	458	2027	583	306	1795	533	156	1319	368	167	1319	615
v/s Ratio Prot	0.13	c0.47		0.12	0.38		c0.07	0.22		0.07	0.28	c0.14
v/s Ratio Perm			0.31			0.13	c0.33		0.04	0.30		0.29
v/c Ratio	0.99	1.18	0.78	1.29	1.08	0.37	1.22	0.83	0.15	1.12	1.06	1.08
Uniform Delay, d1	51.9	36.4	31.9	54.5	38.9	28.9	37.0	41.5	33.6	35.3	44.0	36.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.5	88.0	10.2	151.9	47.8	2.0	144.9	6.3	0.9	105.4	41.6	58.5
Delay (s)	90.4	124.3	42.0	206.4	86.7	30.9	181.9	47.8	34.5	140.7	85.6	94.5
Level of Service	F	F	D	F	F	C	F	D	C	F	F	F
Approach Delay (s)		106.5			99.5			63.9			92.8	
Approach LOS		F			F			E			F	

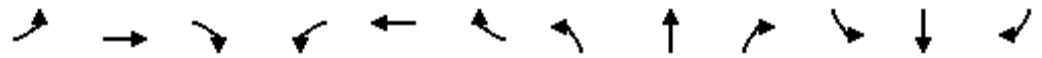
Intersection Summary		
HCM Average Control Delay	95.1	HCM Level of Service
HCM Volume to Capacity ratio	1.17	F
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	114.9%	18.7
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		H



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	189	90	1741	55	70	2038
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frbp, ped/bikes	1.00	1.00	1.00	0.75	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1807	1633	5142	1198	1715	5092
Flt Permitted	0.95	1.00	1.00	1.00	0.11	1.00
Satd. Flow (perm)	1807	1633	5142	1198	194	5092
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	189	90	1741	55	70	2038
RTOR Reduction (vph)	0	17	0	8	0	0
Lane Group Flow (vph)	189	73	1741	47	70	2038
Confl. Peds. (#/hr)	1			61	61	
Heavy Vehicles (%)	1%	0%	2%	2%	5%	3%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	18.4	18.4	75.5	75.5	74.5	74.5
Effective Green, g (s)	18.4	18.4	75.5	75.5	74.5	74.5
Actuated g/C Ratio	0.17	0.17	0.70	0.70	0.69	0.69
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	307	277	3581	834	133	3500
v/s Ratio Prot	c0.10		0.34			c0.40
v/s Ratio Perm		0.04		0.04	0.36	
v/c Ratio	0.62	0.26	0.49	0.06	0.53	0.58
Uniform Delay, d1	41.7	39.1	7.5	5.2	8.3	8.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	1.1	0.2	0.1	7.0	0.4
Delay (s)	46.9	40.2	7.8	5.3	15.3	9.2
Level of Service	D	D	A	A	B	A
Approach Delay (s)	44.7		7.7			9.4
Approach LOS	D		A			A

Intersection Summary

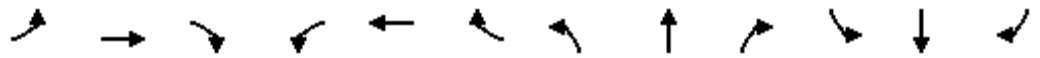
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Volume (vph)	20	20	20	33	1	17	7	1421	24	7	2286	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1747		1639	1649		1825	4948	1458	1825	5092	1432
Flt Permitted	0.75	1.00		0.73	1.00		0.06	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	1433	1747		1261	1649		114	4948	1458	328	5092	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	20	20	33	1	17	7	1421	24	7	2286	14
RTOR Reduction (vph)	0	12	0	0	16	0	0	0	3	0	0	1
Lane Group Flow (vph)	20	28	0	33	2	0	7	1421	21	7	2286	13
Confl. Peds. (#/hr)			13	13								
Heavy Vehicles (%)	0%	0%	0%	9%	0%	0%	0%	6%	12%	0%	3%	14%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	8.8	8.8		8.8	8.8		91.6	91.6	91.6	91.6	91.6	91.6
Effective Green, g (s)	8.8	8.8		8.8	8.8		91.6	91.6	91.6	91.6	91.6	91.6
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.80	0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	111	135		97	127		92	3979	1173	264	4095	1152
v/s Ratio Prot		0.02			0.00			0.29			c0.45	
v/s Ratio Perm	0.01			c0.03			0.06		0.01	0.02		0.01
v/c Ratio	0.18	0.21		0.34	0.02		0.08	0.36	0.02	0.03	0.56	0.01
Uniform Delay, d1	49.2	49.3		49.8	48.6		2.3	3.1	2.2	2.2	4.0	2.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	1.6		4.3	0.1		1.6	0.3	0.0	0.2	0.6	0.0
Delay (s)	50.8	50.9		54.1	48.7		3.9	3.3	2.2	2.4	4.5	2.2
Level of Service	D	D		D	D		A	A	A	A	A	A
Approach Delay (s)		50.9			52.2			3.3			4.5	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	113.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↗↘	↗	↗	↗↗↘	↗
Volume (vph)	109	173	168	341	304	116	68	1134	25	135	2129	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	3.0	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1792	3265		1789	3254		1644	4902	1633	1755	5092	1432
Flt Permitted	0.44	1.00		0.44	1.00		0.08	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	837	3265		830	3254		141	4902	1633	325	5092	1432
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	173	168	341	304	116	68	1134	25	135	2129	46
RTOR Reduction (vph)	0	59	0	0	37	0	0	0	13	0	0	12
Lane Group Flow (vph)	109	282	0	341	383	0	68	1134	12	135	2129	34
Confl. Peds. (#/hr)	38					38						
Heavy Vehicles (%)	1%	5%	2%	2%	8%	1%	11%	7%	0%	4%	3%	14%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	25.5	18.5		29.5	20.5		51.6	49.2	49.2	61.9	56.5	56.5
Effective Green, g (s)	25.5	18.5		29.5	20.5		51.6	49.2	49.2	61.9	56.5	56.5
Actuated g/C Ratio	0.24	0.17		0.28	0.19		0.48	0.46	0.46	0.58	0.53	0.53
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	3.0	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	262	566		310	625		102	2258	752	318	2694	758
v/s Ratio Prot	0.03	0.09		c0.09	0.12		c0.01	0.23		0.04	c0.42	
v/s Ratio Perm	0.07			c0.21			0.31		0.01	0.21		0.02
v/c Ratio	0.42	0.50		1.10	0.61		0.67	0.50	0.02	0.42	0.79	0.05
Uniform Delay, d1	33.0	40.0		37.0	39.5		18.6	20.2	15.6	11.5	20.4	12.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	1.4		80.6	2.6		19.7	0.8	0.0	1.9	2.5	0.1
Delay (s)	35.2	41.4		117.6	42.1		38.3	21.0	15.7	13.4	22.8	12.2
Level of Service	D	D		F	D		D	C	B	B	C	B
Approach Delay (s)		39.9			75.9			21.9			22.0	
Approach LOS		D			E			C			C	

Intersection Summary

HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	106.8	Sum of lost time (s)	15.6
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Volume (vph)	245	3443	220	333	2527	182	68	775	116	477	1781	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	5.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3340	5043	1548	3506	5092	1546	1789	4902	1501	3471	5092	1518
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3340	5043	1548	3506	5092	1546	241	4902	1501	3471	5092	1518
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	245	3443	220	333	2527	182	68	775	116	477	1781	281
RTOR Reduction (vph)	0	0	74	0	0	88	0	0	86	0	0	105
Lane Group Flow (vph)	245	3443	146	333	2527	94	68	775	30	477	1781	176
Confl. Peds. (#/hr)	3		10	10		3	2		4	4		2
Heavy Vehicles (%)	6%	4%	3%	1%	3%	4%	2%	7%	7%	2%	3%	6%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4			8
Actuated Green, G (s)	7.0	48.1	48.1	7.0	48.1	48.1	35.2	31.2	31.2	10.0	39.2	39.2
Effective Green, g (s)	7.0	48.1	48.1	7.0	48.1	48.1	35.2	31.2	31.2	10.0	39.2	39.2
Actuated g/C Ratio	0.06	0.40	0.40	0.06	0.40	0.40	0.29	0.26	0.26	0.08	0.33	0.33
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	5.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	195	2021	620	205	2041	620	122	1275	390	289	1663	496
v/s Ratio Prot	0.07	c0.68		c0.09	0.50		0.02	0.16		c0.14	c0.35	
v/s Ratio Perm			0.09			0.06	0.14		0.02			0.12
v/c Ratio	1.26	1.70	0.24	1.62	1.24	0.15	0.56	0.61	0.08	1.65	1.07	0.35
Uniform Delay, d1	56.5	36.0	23.8	56.5	36.0	22.9	34.3	39.0	33.5	55.0	40.4	30.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	150.1	318.8	0.9	302.2	111.6	0.5	9.1	1.2	0.2	307.8	43.8	0.9
Delay (s)	206.6	354.7	24.7	358.7	147.5	23.5	43.4	40.2	33.7	362.8	84.2	31.7
Level of Service	F	F	C	F	F	C	D	D	C	F	F	C
Approach Delay (s)		326.9			163.2			39.7			130.7	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	205.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	133.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	7	90	83	2	24	21	879	21	16	2267	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.86		1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1491	1639		1789	1631		1721	4887		1697	5083	
Flt Permitted	0.74	1.00		0.69	1.00		0.06	1.00		0.30	1.00	
Satd. Flow (perm)	1162	1639		1308	1631		101	4887		543	5083	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	7	90	83	2	24	21	879	21	16	2267	26
RTOR Reduction (vph)	0	15	0	0	21	0	0	2	0	0	1	0
Lane Group Flow (vph)	21	82	0	83	5	0	21	898	0	16	2292	0
Confl. Peds. (#/hr)	2					2	4		6	6		4
Heavy Vehicles (%)	22%	0%	1%	2%	0%	0%	6%	7%	0%	7%	3%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.3	14.3		14.3	14.3		91.3	91.3		91.3	91.3	
Effective Green, g (s)	14.3	14.3		14.3	14.3		91.3	91.3		91.3	91.3	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.78	0.78		0.78	0.78	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	141	199		159	198		78	3794		422	3946	
v/s Ratio Prot		0.05			0.00			0.18			c0.45	
v/s Ratio Perm	0.02			c0.06			0.21			0.03		
v/c Ratio	0.15	0.41		0.52	0.02		0.27	0.24		0.04	0.58	
Uniform Delay, d1	46.2	47.8		48.4	45.5		3.7	3.6		3.0	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	2.9		5.8	0.1		8.3	0.1		0.2	0.6	
Delay (s)	47.2	50.7		54.2	45.6		12.0	3.8		3.2	6.0	
Level of Service	D	D		D	D		B	A		A	A	
Approach Delay (s)		50.0			52.2			3.9			6.0	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕	↖	↗	↕	↖
Volume (vph)	87	276	14	172	457	12	44	742	56	149	2173	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1706	3518		1715	3567		1772	4683	1512	1789	5099	
Flt Permitted	0.38	1.00		0.55	1.00		0.06	1.00	1.00	0.32	1.00	
Satd. Flow (perm)	689	3518		994	3567		114	4683	1512	605	5099	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	87	276	14	172	457	12	44	742	56	149	2173	99
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	25	0	4	0
Lane Group Flow (vph)	87	287	0	172	468	0	44	742	31	149	2268	0
Confl. Peds. (#/hr)			19	19								
Heavy Vehicles (%)	7%	3%	0%	5%	2%	0%	3%	12%	8%	2%	2%	6%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2			1	6
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	34.5	34.5		34.5	34.5		65.5	65.5	65.5	72.8	72.8	
Effective Green, g (s)	34.5	34.5		34.5	34.5		65.5	65.5	65.5	72.8	72.8	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.55	0.55	0.55	0.61	0.61	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	198	1011		286	1026		62	2556	825	397	3093	
v/s Ratio Prot		0.08			0.13			0.16		0.01	c0.44	
v/s Ratio Perm	0.13			c0.17			0.39		0.02	0.22		
v/c Ratio	0.44	0.28		0.60	0.46		0.71	0.29	0.04	0.38	0.73	
Uniform Delay, d1	34.9	33.2		36.8	35.1		20.2	14.7	12.6	11.7	16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.9	0.7		9.0	1.5		51.0	0.3	0.1	1.2	1.1	
Delay (s)	41.8	33.9		45.9	36.5		71.2	15.0	12.7	12.9	17.8	
Level of Service	D	C		D	D		E	B	B	B	B	
Approach Delay (s)		35.7			39.0			17.8			17.5	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.7
Intersection Capacity Utilization	110.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Volume (vph)	91	1757	208	288	923	70	52	644	122	162	2172	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1705	3579	1531	1722	3544	1455	1722	5043	1504	1771	5142	1534
Flt Permitted	0.17	1.00	1.00	0.08	1.00	1.00	0.11	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)	314	3579	1531	153	3544	1455	196	5043	1504	563	5142	1534
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	91	1757	208	288	923	70	52	644	122	162	2172	155
RTOR Reduction (vph)	0	0	5	0	0	21	0	0	77	0	0	21
Lane Group Flow (vph)	91	1757	203	288	923	49	52	644	45	162	2172	134
Confl. Peds. (#/hr)	16		12	12		16	1		2	2		1
Heavy Vehicles (%)	7%	2%	4%	6%	3%	9%	6%	4%	7%	3%	2%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	56.6	47.0	47.0	57.4	47.4	47.4	37.0	37.0	37.0	48.0	48.0	48.0
Effective Green, g (s)	56.6	47.0	47.0	57.4	47.4	47.4	37.0	37.0	37.0	48.0	48.0	48.0
Actuated g/C Ratio	0.47	0.39	0.39	0.48	0.39	0.39	0.31	0.31	0.31	0.40	0.40	0.40
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	6.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	259	1402	600	204	1400	575	60	1555	464	306	2057	614
v/s Ratio Prot	0.03	0.49		c0.12	0.26			0.13		0.04	c0.42	
v/s Ratio Perm	0.14		0.13	c0.56		0.03	0.27		0.03	0.18		0.09
v/c Ratio	0.35	1.25	0.34	1.41	0.66	0.08	0.87	0.41	0.10	0.53	1.06	0.22
Uniform Delay, d1	19.8	36.5	25.6	34.4	29.7	22.7	39.2	32.9	29.6	24.3	36.0	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	120.0	0.7	211.8	1.5	0.1	82.2	0.8	0.4	3.1	36.5	0.8
Delay (s)	21.5	156.5	26.3	246.2	31.2	22.9	121.4	33.7	30.0	27.4	72.5	24.5
Level of Service	C	F	C	F	C	C	F	C	C	C	E	C
Approach Delay (s)		137.3			79.1			38.7			66.6	
Approach LOS		F			E			D			E	

Intersection Summary

HCM Average Control Delay	87.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	131.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↗	↗	↑↑↑	↗
Volume (vph)	18	20	141	129	22	16	52	639	56	16	2265	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes		0.98			1.00		1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.89			0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1652			1784		1674	4683	1414	1685	5092	1575
Flt Permitted		0.96			0.59		0.06	1.00	1.00	0.40	1.00	1.00
Satd. Flow (perm)		1591			1097		101	4683	1414	706	5092	1575
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	20	141	129	22	16	52	639	56	16	2265	23
RTOR Reduction (vph)	0	71	0	0	3	0	0	0	23	0	0	3
Lane Group Flow (vph)	0	108	0	0	164	0	52	639	33	16	2265	20
Confl. Peds. (#/hr)	17		4	4		17	5		6	6		5
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	9%	12%	11%	8%	3%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		30.0			30.0		74.7	70.0	70.0	71.1		68.7
Effective Green, g (s)		30.0			30.0		74.7	70.0	70.0	71.1		68.7
Actuated g/C Ratio		0.25			0.25		0.62	0.58	0.58	0.59		0.57
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		396			273		124	2723	822	436		2905
v/s Ratio Prot							c0.02	0.14		0.00		c0.44
v/s Ratio Perm		0.07			c0.15		0.24		0.02	0.02		0.01
v/c Ratio		0.27			0.60		0.42	0.23	0.04	0.04		0.78
Uniform Delay, d1		36.4			39.9		17.7	12.2	10.8	10.2		20.0
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.7			9.4		4.7	0.2	0.1	0.1		2.1
Delay (s)		38.1			49.3		22.4	12.4	10.9	10.3		22.1
Level of Service		D			D		C	B	B	B		C
Approach Delay (s)		38.1			49.3			13.0				22.0
Approach LOS		D			D			B				C

Intersection Summary

HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.4	Sum of lost time (s)	21.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘		↘	↑↑↑	↑↑↑	↘
Volume (veh/h)	56	99	22	770	2586	44
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	56	99	22	770	2586	44
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					349	
pX, platoon unblocked	0.62	0.62	0.62			
vC, conflicting volume	2891	866	2634			
vC1, stage 1 conf vol	2590					
vC2, stage 2 conf vol	301					
vCu, unblocked vol	1890	0	1474			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.3	2.2			
p0 queue free %	49	85	92			
cM capacity (veh/h)	110	668	285			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	155	22	257	257	257	862	862	862	44
Volume Left	56	22	0	0	0	0	0	0	0
Volume Right	99	0	0	0	0	0	0	0	44
cSH	235	285	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.66	0.08	0.15	0.15	0.15	0.51	0.51	0.51	0.03
Queue Length 95th (m)	31.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	45.7	18.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	C							
Approach Delay (s)	45.7	0.5				0.0			
Approach LOS	E								

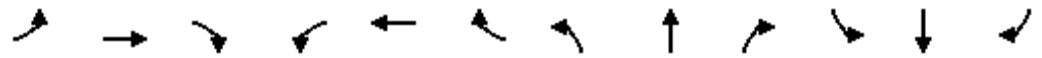
Intersection Summary									
Average Delay			2.1						
Intersection Capacity Utilization		65.8%		ICU Level of Service					C
Analysis Period (min)			15						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Volume (vph)	38	571	79	79	243	158	20	526	89	113	2470	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1690	3501		1738	3316		1825	4810		1754	5131	
Flt Permitted	0.46	1.00		0.27	1.00		0.07	1.00		0.37	1.00	
Satd. Flow (perm)	814	3501		489	3316		132	4810		692	5131	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	38	571	79	79	243	158	20	526	89	113	2470	25
RTOR Reduction (vph)	0	2	0	0	90	0	0	20	0	0	1	0
Lane Group Flow (vph)	38	648	0	79	311	0	20	595	0	113	2494	0
Confl. Peds. (#/hr)							1		3	3		1
Heavy Vehicles (%)	8%	2%	5%	5%	2%	6%	0%	7%	3%	4%	2%	6%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	37.2	37.2		37.2	37.2		58.2	58.2		69.9	69.9	
Effective Green, g (s)	37.2	37.2		37.2	37.2		58.2	58.2		69.9	69.9	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.49	0.49		0.58	0.58	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	252	1085		152	1028		64	2333		474	2989	
v/s Ratio Prot		c0.19			0.09			0.12		0.02	c0.49	
v/s Ratio Perm	0.05			0.16			0.15			0.12		
v/c Ratio	0.15	0.60		0.52	0.30		0.31	0.26		0.24	0.83	
Uniform Delay, d1	30.0	35.1		34.1	31.5		18.8	18.2		11.3	20.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	2.4		12.1	0.8		12.3	0.3		0.5	2.4	
Delay (s)	31.2	37.5		46.2	32.3		31.1	18.4		11.8	22.7	
Level of Service	C	D		D	C		C	B		B	C	
Approach Delay (s)		37.1			34.6			18.8			22.3	
Approach LOS		D			C			B			C	

Intersection Summary

HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.9
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	2612	253	364	1647	86	142	447	142	362	2142	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	199	4995	1573	3404	4812	1425	3248	5043	1304	3471	5142	1558
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	63	2612	253	364	1647	86	142	447	142	362	2142	316
RTOR Reduction (vph)	0	0	87	0	0	53	0	0	114	0	0	105
Lane Group Flow (vph)	63	2612	166	364	1647	33	142	447	28	362	2142	211
Confl. Peds. (#/hr)	1		3	3		1	3		3	3		3
Heavy Vehicles (%)	0%	5%	2%	4%	9%	13%	9%	4%	23%	2%	2%	3%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	44.3	38.7	38.7	10.0	46.1	46.1	5.0	24.0	24.0	18.3	37.3	37.3
Effective Green, g (s)	44.3	38.7	38.7	10.0	46.1	46.1	5.0	24.0	24.0	18.3	37.3	37.3
Actuated g/C Ratio	0.37	0.32	0.32	0.08	0.38	0.38	0.04	0.20	0.20	0.15	0.31	0.31
Clearance Time (s)	4.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	149	1611	507	284	1849	547	135	1009	261	529	1598	484
v/s Ratio Prot	0.02	c0.52		c0.11	c0.34		0.04	0.09		c0.10	c0.42	
v/s Ratio Perm	0.14		0.11			0.02			0.02			0.14
v/c Ratio	0.42	1.62	0.33	1.28	0.89	0.06	1.05	0.44	0.11	0.68	1.34	0.44
Uniform Delay, d1	27.2	40.6	30.8	55.0	34.6	23.3	57.5	42.1	39.3	48.1	41.4	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	282.5	1.7	151.0	7.0	0.2	92.0	0.7	0.4	4.7	157.5	1.3
Delay (s)	31.2	323.1	32.5	206.0	41.5	23.5	149.5	42.8	39.6	52.8	198.9	34.3
Level of Service	C	F	C	F	D	C	F	D	D	D	F	C
Approach Delay (s)		291.7			69.3			62.9			161.7	
Approach LOS		F			E			E			F	

Intersection Summary

HCM Average Control Delay	175.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	36.3
Intersection Capacity Utilization	130.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	26	7	644	2678	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	11	26	7	644	2678	7
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)					179	
pX, platoon unblocked	0.58	0.58	0.58			
vC, conflicting volume	2915	901	2690			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1772	0	1384			
tC, single (s)	7.2	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.3	2.2			
p0 queue free %	67	96	98			
cM capacity (veh/h)	34	622	290			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	37	7	215	215	215	1071	1071	543
Volume Left	11	7	0	0	0	0	0	0
Volume Right	26	0	0	0	0	0	0	7
cSH	101	290	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.37	0.02	0.13	0.13	0.13	0.63	0.63	0.32
Queue Length 95th (m)	11.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	60.2	17.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	C						
Approach Delay (s)	60.2	0.2				0.0		
Approach LOS	F							

Intersection Summary		
Average Delay		0.7
Intersection Capacity Utilization	61.9%	ICU Level of Service B
Analysis Period (min)		15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	66	35	561	2742	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	66	35	561	2742	26
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)				194		
pX, platoon unblocked	0.94					
vC, conflicting volume	3017	932	2773			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2930	932	2773			
tC, single (s)	6.8	7.0	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	0	75	71			
cM capacity (veh/h)	8	263	119			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	76	35	187	187	187	1097	1097	574
Volume Left	10	35	0	0	0	0	0	0
Volume Right	66	0	0	0	0	0	0	26
cSH	51	119	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.48	0.29	0.11	0.11	0.11	0.65	0.65	0.34
Queue Length 95th (m)	53.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	423.0	47.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	E						
Approach Delay (s)	423.0	2.8				0.0		
Approach LOS	F							

Intersection Summary			
Average Delay		9.8	
Intersection Capacity Utilization	64.9%		ICU Level of Service C
Analysis Period (min)	15		

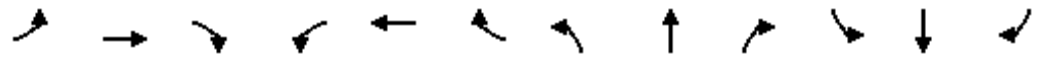


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘↗	↑↑↗	
Volume (vph)	189	1111	81	163	1258	251	160	1333	212	433	576	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	5.0	6.6	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1560	3650	1633	1789	3614	1633	1825	5043	1633	3541	4563	
Flt Permitted	0.10	1.00	1.00	0.10	1.00	1.00	0.37	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	161	3650	1633	185	3614	1633	717	5043	1633	3541	4563	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	189	1111	81	163	1258	251	160	1333	212	433	576	126
RTOR Reduction (vph)	0	0	20	0	0	56	0	0	65	0	29	0
Lane Group Flow (vph)	189	1111	61	163	1258	195	160	1333	147	433	673	0
Heavy Vehicles (%)	17%	0%	0%	2%	1%	0%	0%	4%	0%	0%	7%	34%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2			
Actuated Green, G (s)	51.9	40.9	40.9	51.7	40.8	40.8	37.8	32.8	32.8	15.0	44.4	
Effective Green, g (s)	51.9	40.9	40.9	51.7	40.8	40.8	37.8	32.8	32.8	15.0	44.4	
Actuated g/C Ratio	0.43	0.34	0.34	0.43	0.34	0.34	0.31	0.27	0.27	0.12	0.37	
Clearance Time (s)	3.0	6.2	6.2	3.0	6.2	6.2	3.0	6.2	6.2	5.0	6.6	
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	198	1244	557	225	1229	555	272	1378	446	443	1688	
v/s Ratio Prot	c0.09	0.30		0.07	c0.35		0.02	c0.26		c0.12	0.15	
v/s Ratio Perm	0.33		0.04	0.25		0.12	0.16		0.09			
v/c Ratio	0.95	0.89	0.11	0.72	1.02	0.35	0.59	0.97	0.33	0.98	0.40	
Uniform Delay, d1	32.4	37.5	27.1	26.6	39.6	29.7	31.6	43.1	34.8	52.3	27.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	51.5	10.0	0.4	13.3	31.8	1.7	5.0	17.6	2.0	36.9	0.7	
Delay (s)	83.9	47.5	27.5	39.9	71.4	31.4	36.6	60.7	36.8	89.2	28.6	
Level of Service	F	D	C	D	E	C	D	E	D	F	C	
Approach Delay (s)		51.3			62.3			55.4			51.7	
Approach LOS		D			E			E			D	

Intersection Summary

HCM Average Control Delay	55.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑	↖	↖	↑↑	↖
Volume (vph)	520	1943	318	111	2538	98	668	900	134	204	618	652
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	3.0	6.7	5.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	4856	1601	1772	4995	1266	3372	3579	1478	1690	3510	1633
Flt Permitted	0.95	1.00	1.00	0.09	1.00	1.00	0.95	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	3471	4856	1601	168	4995	1266	3372	3579	1478	261	3510	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	520	1943	318	111	2538	98	668	900	134	204	618	652
RTOR Reduction (vph)	0	0	101	0	0	16	0	0	85	0	0	0
Lane Group Flow (vph)	520	1943	217	111	2538	82	668	900	49	204	618	652
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	2%	8%	2%	3%	5%	29%	5%	2%	9%	8%	4%	0%
Turn Type	Prot		Perm	pm+pt		Perm	Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4	8		8			2	6		6
Actuated Green, G (s)	11.0	51.3	51.3	50.3	44.3	44.3	14.0	35.3	35.3	35.3	27.3	38.3
Effective Green, g (s)	11.0	51.3	51.3	50.3	44.3	44.3	14.0	35.3	35.3	35.3	27.3	38.3
Actuated g/C Ratio	0.09	0.43	0.43	0.42	0.37	0.37	0.12	0.29	0.29	0.29	0.23	0.32
Clearance Time (s)	5.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	3.0	6.7	5.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	318	2076	684	151	1844	467	393	1053	435	172	799	521
v/s Ratio Prot	c0.15	0.40		0.04	c0.51		c0.20	0.25		0.08	0.18	c0.11
v/s Ratio Perm			0.14	0.27		0.06			0.03	0.27		0.28
v/c Ratio	1.64	0.94	0.32	0.74	1.38	0.18	1.70	0.85	0.11	1.19	0.77	1.25
Uniform Delay, d1	54.5	32.8	22.7	26.6	37.9	25.5	53.0	39.9	30.9	37.5	43.5	40.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	299.7	9.0	0.6	20.1	172.9	0.4	325.6	8.9	0.5	127.5	7.2	128.3
Delay (s)	354.2	41.8	23.3	46.7	210.7	25.9	378.6	48.8	31.4	165.0	50.6	169.2
Level of Service	F	D	C	D	F	C	F	D	C	F	D	F
Approach Delay (s)		98.1			197.5			176.9			118.9	
Approach LOS		F			F			F			F	

Intersection Summary

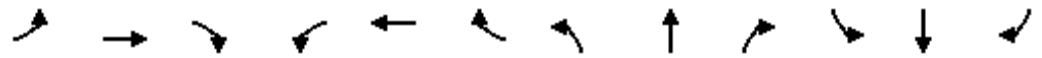
HCM Average Control Delay	148.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	122.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↗	↗	↑↑↑	
Volume (vph)	20	20	20	110	25	27	30	1572	21	9	815	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes		1.00			1.00		1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.95			0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98			0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1796			1773		1824	5092	1596	1825	5066	
Flt Permitted		0.87			0.76		0.32	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1595			1392		618	5092	1596	246	5066	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	20	20	110	25	27	30	1572	21	9	815	30
RTOR Reduction (vph)	0	16	0	0	7	0	0	0	6	0	3	0
Lane Group Flow (vph)	0	44	0	0	155	0	30	1572	15	9	842	0
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	13%	0%	3%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		17.3			17.3		54.0	54.0	54.0	54.0	54.0	54.0
Effective Green, g (s)		17.3			17.3		54.0	54.0	54.0	54.0	54.0	54.0
Actuated g/C Ratio		0.20			0.20		0.64	0.64	0.64	0.64	0.64	0.64
Clearance Time (s)		6.9			6.9		6.6	6.6	6.6	6.6	6.6	6.6
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)		325			284		394	3243	1016	157	3226	
v/s Ratio Prot								c0.31				0.17
v/s Ratio Perm		0.03			c0.11		0.05		0.01	0.04		
v/c Ratio		0.14			0.55		0.08	0.48	0.01	0.06	0.26	
Uniform Delay, d1		27.6			30.2		5.9	8.1	5.6	5.8	6.7	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4			3.7		0.2	0.2	0.0	0.3	0.1	
Delay (s)		28.0			34.0		6.1	8.3	5.7	6.1	6.8	
Level of Service		C			C		A	A	A	A	A	
Approach Delay (s)		28.0			34.0			8.3			6.8	
Approach LOS		C			C			A			A	

Intersection Summary

HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↔	↔	↑↑↑	↔	↔	↑↑↑	↔
Volume (vph)	412	2364	230	261	2528	105	544	1199	333	274	386	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3471	5193	1576	3404	5193	1604	1822	5043	1571	1825	4948	1579
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	3471	5193	1576	3404	5193	1604	969	5043	1571	248	4948	1579
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	412	2364	230	261	2528	105	544	1199	333	274	386	393
RTOR Reduction (vph)	0	0	39	0	0	17	0	0	87	0	0	7
Lane Group Flow (vph)	412	2364	191	261	2528	88	544	1199	246	274	386	386
Confl. Peds. (#/hr)	5		11	11		5	5		14	14		5
Heavy Vehicles (%)	2%	1%	1%	4%	1%	0%	0%	4%	1%	0%	6%	2%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	10.0	49.3	49.3	6.0	45.3	45.3	42.0	31.0	31.0	42.0	31.0	41.0
Effective Green, g (s)	10.0	49.3	49.3	6.0	45.3	45.3	42.0	31.0	31.0	42.0	31.0	41.0
Actuated g/C Ratio	0.08	0.41	0.41	0.05	0.38	0.38	0.35	0.26	0.26	0.35	0.26	0.34
Clearance Time (s)	5.0	7.7	7.7	5.0	7.7	7.7	3.0	7.0	7.0	3.0	7.0	5.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	289	2133	647	170	1960	606	417	1303	406	231	1278	539
v/s Ratio Prot	c0.12	c0.46		0.08	c0.49		c0.12	0.24		0.11	0.08	0.06
v/s Ratio Perm			0.12			0.05	c0.34		0.16	0.31		0.18
v/c Ratio	1.43	1.11	0.29	1.54	1.29	0.15	1.30	0.92	0.61	1.19	0.30	0.72
Uniform Delay, d1	55.0	35.4	23.7	57.0	37.4	24.6	36.3	43.3	39.1	32.3	35.8	34.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	210.5	56.2	1.2	268.2	134.4	0.5	153.6	12.0	6.6	118.8	0.6	5.6
Delay (s)	265.5	91.6	24.9	325.2	171.7	25.1	189.8	55.2	45.7	151.1	36.4	40.0
Level of Service	F	F	C	F	F	C	F	E	D	F	D	D
Approach Delay (s)		110.3			180.2			89.0			67.6	
Approach LOS		F			F			F			E	

Intersection Summary

HCM Average Control Delay	122.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	26.4
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	181	69	1521	178	92	858
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frbp, ped/bikes	1.00	0.97	1.00	0.89	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1615	1359	4902	1337	1472	4768
Flt Permitted	0.95	1.00	1.00	1.00	0.14	1.00
Satd. Flow (perm)	1615	1359	4902	1337	216	4768
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	181	69	1521	178	92	858
RTOR Reduction (vph)	0	33	0	34	0	0
Lane Group Flow (vph)	181	36	1521	144	92	858
Confl. Peds. (#/hr)	4	23		27	27	
Heavy Vehicles (%)	13%	16%	7%	9%	23%	10%
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	18.0	18.0	60.3	60.3	59.3	59.3
Effective Green, g (s)	18.0	18.0	60.3	60.3	59.3	59.3
Actuated g/C Ratio	0.19	0.19	0.65	0.65	0.64	0.64
Clearance Time (s)	7.1	7.1	7.4	7.4	8.4	8.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	313	264	3185	869	138	3047
v/s Ratio Prot	c0.11		0.31			0.18
v/s Ratio Perm		0.03		0.11	c0.43	
v/c Ratio	0.58	0.14	0.48	0.17	0.67	0.28
Uniform Delay, d1	34.0	31.0	8.3	6.4	10.5	7.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	0.5	0.2	0.2	15.0	0.1
Delay (s)	38.0	31.5	8.5	6.6	25.5	7.5
Level of Service	D	C	A	A	C	A
Approach Delay (s)	36.2		8.3			9.2
Approach LOS	D		A			A

Intersection Summary

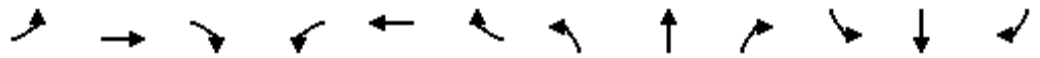
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	92.8	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑	↗	↖	↑↑↑	↗
Volume (vph)	20	13	13	29	5	17	65	2025	80	13	802	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.98	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	1744		1781	1698		1789	5142	1633	1825	5092	1633
Flt Permitted	0.74	1.00		0.74	1.00		0.34	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1427	1744		1388	1698		634	5142	1633	162	5092	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	13	13	29	5	17	65	2025	80	13	802	27
RTOR Reduction (vph)	0	12	0	0	16	0	0	0	7	0	0	5
Lane Group Flow (vph)	20	14	0	29	6	0	65	2025	73	13	802	22
Confl. Peds. (#/hr)			15	15								
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	2%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	6.5	6.5		6.5	6.5		91.7	91.7	91.7	91.7	91.7	91.7
Effective Green, g (s)	6.5	6.5		6.5	6.5		91.7	91.7	91.7	91.7	91.7	91.7
Actuated g/C Ratio	0.06	0.06		0.06	0.06		0.82	0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	7.2	7.2		7.2	7.2		6.3	6.3	6.3	6.3	6.3	6.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	83	101		81	99		520	4221	1341	133	4180	1341
v/s Ratio Prot		0.01			0.00			c0.39				0.16
v/s Ratio Perm	0.01			c0.02			0.10		0.04	0.08		0.01
v/c Ratio	0.24	0.14		0.36	0.06		0.12	0.48	0.05	0.10	0.19	0.02
Uniform Delay, d1	50.2	49.9		50.6	49.7		2.0	3.0	1.9	1.9	2.1	1.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	1.3		5.6	0.5		0.5	0.4	0.1	1.5	0.1	0.0
Delay (s)	53.4	51.2		56.2	50.3		2.5	3.3	2.0	3.4	2.2	1.8
Level of Service	D	D		E	D		A	A	A	A	A	A
Approach Delay (s)		52.2			53.6			3.3			2.2	
Approach LOS		D			D			A			A	

Intersection Summary

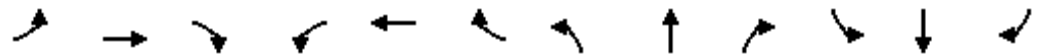
HCM Average Control Delay	4.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	111.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗↘	↖	↖	↖↗↘	↖
Volume (vph)	92	298	134	182	341	73	205	2080	158	69	706	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	3.0	6.6	6.6
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1789	3456		1789	3449		1807	5142	1633	1789	5043	1633
Flt Permitted	0.44	1.00		0.36	1.00		0.33	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	837	3456		670	3449		623	5142	1633	150	5043	1633
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	92	298	134	182	341	73	205	2080	158	69	706	35
RTOR Reduction (vph)	0	48	0	0	17	0	0	0	45	0	0	19
Lane Group Flow (vph)	92	384	0	182	397	0	205	2080	113	69	706	16
Confl. Peds. (#/hr)	44					44						
Heavy Vehicles (%)	1%	1%	0%	2%	2%	2%	1%	2%	0%	2%	4%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	26.4	20.9		29.4	22.4		64.0	55.5	55.5	55.7	50.2	50.2
Effective Green, g (s)	26.4	20.9		29.4	22.4		64.0	55.5	55.5	55.7	50.2	50.2
Actuated g/C Ratio	0.24	0.19		0.27	0.20		0.59	0.51	0.51	0.51	0.46	0.46
Clearance Time (s)	3.0	7.8		3.0	7.8		3.0	6.6	6.6	3.0	6.6	6.6
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	250	661		252	707		482	2611	829	159	2316	750
v/s Ratio Prot	0.02	0.11		c0.05	0.12		c0.04	c0.40		0.02	0.14	
v/s Ratio Perm	0.07			c0.15			0.21		0.07	0.20		0.01
v/c Ratio	0.37	0.58		0.72	0.56		0.43	0.80	0.14	0.43	0.30	0.02
Uniform Delay, d1	33.2	40.2		34.3	39.0		10.8	22.2	14.2	18.1	18.6	16.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	2.0		11.9	1.7		1.3	2.6	0.3	3.9	0.3	0.1
Delay (s)	35.1	42.2		46.1	40.7		12.1	24.9	14.6	22.0	18.9	16.2
Level of Service	D	D		D	D		B	C	B	C	B	B
Approach Delay (s)		41.0			42.4			23.1			19.1	
Approach LOS		D			D			C			B	

Intersection Summary

HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	109.3	Sum of lost time (s)	15.6
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑	↖	↖	↑↑↑	↖	↖↗	↑↑↑	↖
Volume (vph)	483	1815	148	217	2347	470	158	1474	135	335	546	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	5.0	7.4	7.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FrT	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
FlT Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3437	4948	1517	3404	5092	1580	1807	5043	1580	3340	4995	1526
FlT Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.43	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3437	4948	1517	3404	5092	1580	825	5043	1580	3340	4995	1526
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	483	1815	148	217	2347	470	158	1474	135	335	546	152
RTOR Reduction (vph)	0	0	89	0	0	102	0	0	71	0	0	108
Lane Group Flow (vph)	483	1815	59	217	2347	368	158	1474	64	335	546	44
Confl. Peds. (#/hr)	1		3	3		1			1	1		
Heavy Vehicles (%)	3%	6%	6%	4%	3%	2%	1%	4%	2%	6%	5%	7%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6	4		4			8
Actuated Green, G (s)	13.0	47.7	47.7	9.0	43.7	43.7	38.6	31.6	31.6	8.0	34.6	34.6
Effective Green, g (s)	13.0	47.7	47.7	9.0	43.7	43.7	38.6	31.6	31.6	8.0	34.6	34.6
Actuated g/C Ratio	0.11	0.40	0.40	0.08	0.36	0.36	0.32	0.26	0.26	0.07	0.29	0.29
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3	6.3	3.0	7.4	7.4	5.0	7.4	7.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	372	1967	603	255	1854	575	323	1328	416	223	1440	440
v/s Ratio Prot	c0.14	c0.37		0.06	c0.46		0.03	c0.29		c0.10	c0.11	
v/s Ratio Perm			0.04			0.23	0.13		0.04			0.03
v/c Ratio	1.30	0.92	0.10	0.85	1.27	0.64	0.49	1.11	0.15	1.50	0.38	0.10
Uniform Delay, d1	53.5	34.4	22.7	54.8	38.1	31.6	30.3	44.2	33.9	56.0	34.1	31.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	152.8	8.7	0.3	24.7	124.1	5.4	2.4	60.6	0.4	248.0	0.4	0.2
Delay (s)	206.3	43.1	23.0	79.6	162.3	37.0	32.7	104.8	34.3	304.0	34.5	31.5
Level of Service	F	D	C	E	F	D	C	F	C	F	C	C
Approach Delay (s)		74.1			136.9			93.0			121.4	
Approach LOS		E			F			F			F	

Intersection Summary

HCM Average Control Delay	107.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	37.4
Intersection Capacity Utilization	116.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑↑		↖	↑↑↑	
Volume (vph)	15	15	46	44	17	28	70	1669	87	21	932	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.91		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1825	1686		1822	1742		1738	5151		1825	5070	
Flt Permitted	0.73	1.00		0.72	1.00		0.28	1.00		0.12	1.00	
Satd. Flow (perm)	1398	1686		1376	1742		520	5151		221	5070	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	15	46	44	17	28	70	1669	87	21	932	34
RTOR Reduction (vph)	0	42	0	0	26	0	0	3	0	0	2	0
Lane Group Flow (vph)	15	19	0	44	19	0	70	1753	0	21	964	0
Confl. Peds. (#/hr)			1	1					1	1		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	5%	1%	0%	0%	3%	0%
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2				6
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	9.3	9.3		9.3	9.3		89.3	89.3		89.3	89.3	
Effective Green, g (s)	9.3	9.3		9.3	9.3		89.3	89.3		89.3	89.3	
Actuated g/C Ratio	0.08	0.08		0.08	0.08		0.81	0.81		0.81	0.81	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	118	142		116	146		420	4159		178	4094	
v/s Ratio Prot		0.01			0.01			c0.34			0.19	
v/s Ratio Perm	0.01			c0.03			0.13			0.09		
v/c Ratio	0.13	0.13		0.38	0.13		0.17	0.42		0.12	0.24	
Uniform Delay, d1	46.9	46.9		47.9	46.9		2.4	3.1		2.3	2.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.9		4.3	0.9		0.9	0.3		1.3	0.1	
Delay (s)	47.9	47.8		52.2	47.8		3.2	3.4		3.6	2.7	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		47.8			50.0			3.4			2.7	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↗↘	↗	↗	↗↗↘	
Volume (vph)	143	288	81	128	417	105	152	1602	207	159	810	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1772	3341		1792	3505		1825	5142	1633	1789	4987	
Flt Permitted	0.37	1.00		0.49	1.00		0.31	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	690	3341		926	3505		594	5142	1633	133	4987	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	288	81	128	417	105	152	1602	207	159	810	75
RTOR Reduction (vph)	0	21	0	0	19	0	0	0	52	0	9	0
Lane Group Flow (vph)	143	348	0	128	503	0	152	1602	155	159	876	0
Confl. Peds. (#/hr)			14	14								
Heavy Vehicles (%)	3%	0%	23%	1%	1%	1%	0%	2%	0%	2%	4%	2%
Turn Type	Perm			Perm			Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2		2		6	
Actuated Green, G (s)	40.5	40.5		40.5	40.5		52.5	52.5	52.5	66.8	66.8	
Effective Green, g (s)	40.5	40.5		40.5	40.5		52.5	52.5	52.5	66.8	66.8	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.44	0.44	0.44	0.56	0.56	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5	6.5	4.0	6.2	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Grp Cap (vph)	233	1128		313	1183		260	2250	714	212	2776	
v/s Ratio Prot		0.10			0.14			0.31		c0.06	0.18	
v/s Ratio Perm	c0.21			0.14			0.26		0.09	c0.36		
v/c Ratio	0.61	0.31		0.41	0.43		0.58	0.71	0.22	0.75	0.32	
Uniform Delay, d1	33.2	29.4		30.6	30.8		25.5	27.6	21.0	25.7	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.5	0.7		3.9	1.1		9.3	1.9	0.7	16.2	0.1	
Delay (s)	44.7	30.1		34.5	31.9		34.8	29.5	21.7	42.0	14.4	
Level of Service	D	C		C	C		C	C	C	D	B	
Approach Delay (s)		34.2			32.4			29.1			18.6	
Approach LOS		C			C			C			B	

Intersection Summary

HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	781	191	225	1453	196	291	1793	139	164	728	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	3614	1610	1772	3614	1617	1789	5193	1573	1825	5142	1609
Flt Permitted	0.10	1.00	1.00	0.18	1.00	1.00	0.23	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	193	3614	1610	342	3614	1617	430	5193	1573	250	5142	1609
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	781	191	225	1453	196	291	1793	139	164	728	133
RTOR Reduction (vph)	0	0	68	0	0	38	0	0	31	0	0	54
Lane Group Flow (vph)	250	781	123	225	1453	158	291	1793	108	164	728	79
Confl. Peds. (#/hr)			2	2			2		4	4		2
Heavy Vehicles (%)	0%	1%	0%	3%	1%	1%	2%	1%	2%	0%	2%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	48.8	39.8	39.8	57.0	45.0	45.0	51.0	42.0	42.0	36.7	30.7	30.7
Effective Green, g (s)	48.8	39.8	39.8	57.0	45.0	45.0	51.0	42.0	42.0	36.7	30.7	30.7
Actuated g/C Ratio	0.41	0.33	0.33	0.48	0.38	0.38	0.42	0.35	0.35	0.31	0.26	0.26
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	201	1199	534	332	1355	606	379	1818	551	155	1315	412
v/s Ratio Prot	c0.09	0.22		c0.08	0.40		0.11	c0.35		c0.05	0.14	
v/s Ratio Perm	c0.41		0.08	0.24		0.10	0.22		0.07	0.27		0.05
v/c Ratio	1.24	0.65	0.23	0.68	1.07	0.26	0.77	0.99	0.20	1.06	0.55	0.19
Uniform Delay, d1	30.7	34.2	29.0	21.7	37.5	26.0	24.8	38.7	27.2	39.3	38.7	35.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	144.4	1.7	0.5	7.0	46.4	0.5	10.6	18.1	0.8	88.6	1.7	1.0
Delay (s)	175.2	35.9	29.5	28.7	83.9	26.5	35.4	56.8	28.0	127.9	40.4	36.0
Level of Service	F	D	C	C	F	C	D	E	C	F	D	D
Approach Delay (s)		63.4			71.2			52.2			53.8	
Approach LOS		E			E			D			D	

Intersection Summary

HCM Average Control Delay	60.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑	↗	↗	↑↑↑	↗
Volume (vph)	22	22	69	65	18	44	147	1888	128	16	938	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0		4.0	7.0	7.0	4.0	6.0	6.0
Lane Util. Factor		1.00			1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frbp, ped/bikes		0.99			0.98		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.92			0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1659			1733		1825	5193	1559	1825	5142	1590
Flt Permitted		0.92			0.77		0.25	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)		1542			1373		481	5193	1559	166	5142	1590
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	22	69	65	18	44	147	1888	128	16	938	59
RTOR Reduction (vph)	0	47	0	0	16	0	0	0	22	0	0	22
Lane Group Flow (vph)	0	66	0	0	111	0	147	1888	106	16	938	37
Confl. Peds. (#/hr)	18		5	5		18	2		2	2		2
Heavy Vehicles (%)	11%	0%	2%	2%	0%	0%	0%	1%	2%	0%	2%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		25.0			25.0		82.9	76.5	76.5	71.8		69.4
Effective Green, g (s)		25.0			25.0		82.9	76.5	76.5	71.8		69.4
Actuated g/C Ratio		0.21			0.21		0.68	0.63	0.63	0.59		0.57
Clearance Time (s)		7.0			7.0		4.0	7.0	7.0	4.0		6.0
Vehicle Extension (s)		5.0			5.0		5.0	5.0	5.0	5.0		5.0
Lane Grp Cap (vph)		316			282		443	3259	978	130		2927
v/s Ratio Prot							c0.03	c0.36		0.00		0.18
v/s Ratio Perm		0.04			c0.08		0.20		0.07	0.07		0.02
v/c Ratio		0.21			0.39		0.33	0.58	0.11	0.12		0.32
Uniform Delay, d1		40.2			41.9		7.4	13.3	9.1	11.2		13.8
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.5			4.1		0.9	0.8	0.2	0.9		0.3
Delay (s)		41.7			46.0		8.3	14.0	9.3	12.1		14.1
Level of Service		D			D		A	B	A	B		B
Approach Delay (s)		41.7			46.0			13.4				13.9
Approach LOS		D			D			B				B

Intersection Summary

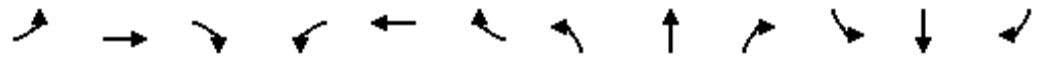
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	121.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	23	55	104	2248	1075	49
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	23	55	104	2248	1075	49
Pedestrians	4					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage veh				2		
Upstream signal (m)					349	
pX, platoon unblocked	0.90	0.90	0.90			
vC, conflicting volume	2036	362	1128			
vC1, stage 1 conf vol	1079					
vC2, stage 2 conf vol	957					
vCu, unblocked vol	1766	0	759			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	94	86			
cM capacity (veh/h)	229	965	745			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	78	104	749	749	749	358	358	358	49
Volume Left	23	104	0	0	0	0	0	0	0
Volume Right	55	0	0	0	0	0	0	0	49
cSH	495	745	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.14	0.44	0.44	0.44	0.21	0.21	0.21	0.03
Queue Length 95th (m)	4.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	13.6	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B							
Approach Delay (s)	13.6	0.5				0.0			
Approach LOS	B								

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	54.8%		ICU Level of Service
Analysis Period (min)	15		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗↘		↖	↖↗↘	
Volume (vph)	62	199	107	190	331	172	200	2160	174	90	998	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1743	3228		1749	3257		1787	5081		1738	5003	
Flt Permitted	0.34	1.00		0.53	1.00		0.26	1.00		0.05	1.00	
Satd. Flow (perm)	623	3228		977	3257		496	5081		100	5003	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	62	199	107	190	331	172	200	2160	174	90	998	40
RTOR Reduction (vph)	0	59	0	0	38	0	0	8	0	0	4	0
Lane Group Flow (vph)	62	247	0	190	465	0	200	2326	0	90	1034	0
Confl. Peds. (#/hr)	13		17	17		13	5		5	5		5
Heavy Vehicles (%)	4%	7%	4%	3%	5%	6%	2%	2%	1%	5%	4%	8%
Turn Type	Perm		Perm		Perm		pm+pt					
Protected Phases		4			8			2			1	6
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	31.2	31.2		31.2	31.2		69.2	69.2		75.9	75.9	
Effective Green, g (s)	31.2	31.2		31.2	31.2		69.2	69.2		75.9	75.9	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.58	0.58		0.63	0.63	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		3.0	6.1	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	162	839		254	847		286	2930		104	3164	
v/s Ratio Prot		0.08			0.14			0.46		c0.02	0.21	
v/s Ratio Perm	0.10			c0.19			0.40			c0.52		
v/c Ratio	0.38	0.29		0.75	0.55		0.70	0.79		0.87	0.33	
Uniform Delay, d1	36.5	35.6		40.8	38.3		18.0	19.8		20.5	10.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.7	0.9		18.1	2.6		13.3	2.3		51.3	0.1	
Delay (s)	43.2	36.5		58.9	40.9		31.3	22.1		71.8	10.3	
Level of Service	D	D		E	D		C	C		E	B	
Approach Delay (s)		37.6			45.8			22.9			15.2	
Approach LOS		D			D			C			B	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.8
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	381	1891	449	420	2878	236	582	2003	269	207	897	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1825	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	184	4902	1531	2975	4948	1494	3541	5193	1502	3278	4948	1512
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	381	1891	449	420	2878	236	582	2003	269	207	897	174
RTOR Reduction (vph)	0	0	136	0	0	118	0	0	127	0	0	143
Lane Group Flow (vph)	381	1891	313	420	2878	118	582	2003	142	207	897	31
Confl. Peds. (#/hr)	5		2	2		5			12	12		
Heavy Vehicles (%)	0%	7%	5%	19%	6%	7%	0%	1%	5%	8%	6%	8%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2			6			4			8
Actuated Green, G (s)	54.7	41.7	41.7	13.0	45.7	45.7	15.0	29.3	29.3	7.0	21.3	21.3
Effective Green, g (s)	54.7	41.7	41.7	13.0	45.7	45.7	15.0	29.3	29.3	7.0	21.3	21.3
Actuated g/C Ratio	0.46	0.35	0.35	0.11	0.38	0.38	0.12	0.24	0.24	0.06	0.18	0.18
Clearance Time (s)	3.0	7.3	7.3	7.0	7.3	7.3	7.0	7.7	7.7	7.0	7.7	7.7
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Grp Cap (vph)	262	1703	532	322	1884	569	443	1268	367	191	878	268
v/s Ratio Prot	c0.16	0.39		0.14	c0.58		c0.16	c0.39		0.06	0.18	
v/s Ratio Perm	0.51		0.20			0.08			0.09			0.02
v/c Ratio	1.45	1.11	0.59	1.30	1.53	0.21	1.31	1.58	0.39	1.08	1.02	0.12
Uniform Delay, d1	35.5	39.1	32.1	53.5	37.1	25.0	52.5	45.4	37.9	56.5	49.4	41.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	224.4	58.7	4.7	157.8	240.2	0.8	156.5	264.7	1.4	89.2	36.0	0.4
Delay (s)	259.9	97.8	36.8	211.3	277.3	25.8	209.0	310.0	39.3	145.7	85.3	41.8
Level of Service	F	F	D	F	F	C	F	F	D	F	F	D
Approach Delay (s)		110.5			252.7			263.9			89.2	
Approach LOS		F			F			F			F	

Intersection Summary

HCM Average Control Delay	198.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	143.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	7	20	2535	1231	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	7	20	2535	1231	10
Pedestrians	5					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.2					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)					179	
pX, platoon unblocked	0.92	0.92	0.92			
vC, conflicting volume	2126	420	1246			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1926	76	972			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	99	97			
cM capacity (veh/h)	53	896	659			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	11	20	845	845	845	492	492	256
Volume Left	4	20	0	0	0	0	0	0
Volume Right	7	0	0	0	0	0	0	10
cSH	133	659	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.08	0.03	0.50	0.50	0.50	0.29	0.29	0.15
Queue Length 95th (m)	2.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	34.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B						
Approach Delay (s)	34.5	0.1				0.0		
Approach LOS	D							

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	59.0%		ICU Level of Service B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	63	123	2497	1205	42
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	19	63	123	2497	1205	42
Pedestrians	2			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)				194		
pX, platoon unblocked	0.77					
vC, conflicting volume	2306	427	1249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1641	427	1249			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	66	89	78			
cM capacity (veh/h)	55	574	558			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	82	123	832	832	832	482	482	283
Volume Left	19	123	0	0	0	0	0	0
Volume Right	63	0	0	0	0	0	0	42
cSH	181	558	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.45	0.22	0.49	0.49	0.49	0.28	0.28	0.17
Queue Length 95th (m)	16.1	6.4	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	40.3	13.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B						
Approach Delay (s)	40.3	0.6				0.0		
Approach LOS	E							

Intersection Summary

Average Delay	1.3
Intersection Capacity Utilization	60.5%
ICU Level of Service	B
Analysis Period (min)	15

Appendix L

2031 Future Conditions –

Queuing Analysis

Summary of All Intervals

RunNumber	1	2	3	4	5	Avg	
Start Time	6:45	6:45	6:45	6:45	6:45	6:45	
End Time	8:00	8:00	8:00	8:00	8:00	8:00	
Total Time (min)	75	75	75	75	75	75	
Time Recorded (min)	60	60	60	60	60	60	
# of Intervals	2	2	2	2	2	2	
# of Recorded Intvl	1	1	1	1	1	1	
Vehs Entered	17186	17089	17106	16756	16893	17036	17008
Vehs Exited	16578	16690	16718	16363	16583	16660	16596
Starting Vehs	1745	1809	1780	1794	1898	1821	1804
Ending Vehs	2353	2208	2168	2187	2208	2197	2214
Denied Entry Before	308	264	309	301	301	248	285
Denied Entry After	5474	5518	5336	5864	5617	5557	5559
Travel Distance (km)	31825	31697	31786	31079	31607	31583	31596
Travel Time (hr)	4887.2	4882.2	4788.2	4994.7	4932.1	4806.9	4881.9
Total Delay (hr)	4337.2	4334.4	4238.2	4456.7	4384.6	4260.7	4335.3
Total Stops	76121	74872	72780	69262	74215	72601	73304
Fuel Used (l)	62796.3	62790.4	61966.6	63353.7	63117.8	61997.6	62670.4

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

RunNumber	1	2	3	4	5	Avg	
Vehs Entered	17186	17089	17106	16756	16893	17036	17008
Vehs Exited	16578	16690	16718	16363	16583	16660	16596
Starting Vehs	1745	1809	1780	1794	1898	1821	1804
Ending Vehs	2353	2208	2168	2187	2208	2197	2214
Denied Entry Before	308	264	309	301	301	248	285
Denied Entry After	5474	5518	5336	5864	5617	5557	5559
Travel Distance (km)	31825	31697	31786	31079	31607	31583	31596
Travel Time (hr)	4887.2	4882.2	4788.2	4994.7	4932.1	4806.9	4881.9
Total Delay (hr)	4337.2	4334.4	4238.2	4456.7	4384.6	4260.7	4335.3
Total Stops	76121	74872	72780	69262	74215	72601	73304
Fuel Used (l)	62796.3	62790.4	61966.6	63353.7	63117.8	61997.6	62670.4

Queuing and Blocking Report
 2031 FT Traffic, AM Peak Hour WImp.

15/08/2009

Intersection: 3: Countryside Dr & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	7.2	39.5	42.6	19.9	119.4	45.9	30.4	12.6	51.5	122.9	133.6	96.5
Average Queue (m)	0.4	15.1	21.5	7.1	66.8	9.8	14.4	2.7	18.5	66.0	69.1	33.9
95th Queue (m)	3.4	30.2	36.6	15.9	107.3	33.1	25.9	9.6	37.7	114.2	113.9	79.5
Link Distance (m)		1245.3	1245.3			1312.6	1312.6			355.8	355.8	355.8
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	30.0			30.0	60.0			30.0	105.0			
Storage Blk Time (%)		1	6	0	14		0			1		4
Queuing Penalty (veh)		0	3	0	11		0			1		14

Intersection: 3: Countryside Dr & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	TR
Maximum Queue (m)	72.3	11.1	13.1	115.0	117.0	117.2
Average Queue (m)	26.3	1.2	4.2	47.4	49.6	55.6
95th Queue (m)	53.9	6.3	11.5	91.3	93.1	98.8
Link Distance (m)				275.6	275.6	275.6
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	30.0	80.0	80.0			
Storage Blk Time (%)	3			1		
Queuing Penalty (veh)	10			1		

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Intersection: 6: Mayfield Rd & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	140.6	199.9	694.6	696.4	695.2	150.0	149.9	654.3	702.1	700.8	98.0	34.2
Average Queue (m)	96.3	149.5	475.8	526.9	459.8	77.7	143.1	373.6	337.8	198.9	18.4	8.3
95th Queue (m)	159.6	243.2	816.4	854.4	773.3	183.7	172.9	740.9	735.3	567.6	58.1	23.0
Link Distance (m)			686.2	686.2	686.2			692.4	692.4	692.4		
Upstream Blk Time (%)			2	2	1			10	1	0		
Queuing Penalty (veh)			0	0	0			0	0	0		
Storage Bay Dist (m)	100.0	100.0				50.0	60.0				30.0	80.0
Storage Blk Time (%)	18	21	56		68	1	78	16		58	1	
Queuing Penalty (veh)	96	115	298		131	6	297	55		43	3	

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	T	T	R
Maximum Queue (m)	33.9	94.5	98.6	67.8	179.8	339.6	339.7	129.7
Average Queue (m)	12.9	47.6	51.5	22.7	177.1	327.2	168.5	16.9
95th Queue (m)	27.0	82.2	85.7	49.1	182.0	366.1	419.4	72.6
Link Distance (m)		930.6	930.6			330.4	330.4	
Upstream Blk Time (%)					86	8		
Queuing Penalty (veh)					0	0		
Storage Bay Dist (m)	80.0			75.0	80.0		30.0	
Storage Blk Time (%)		1	3	0	100	8	18	2
Queuing Penalty (veh)		1	6	1	539	10	50	9

Intersection: 9: Father Tobin Rd & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	TR
Maximum Queue (m)	28.3	118.0	29.5	79.7	173.0	84.2	42.2	39.8	81.6	92.4	99.9
Average Queue (m)	10.9	63.7	6.5	33.8	43.0	35.1	14.4	14.2	31.1	35.9	44.4
95th Queue (m)	22.7	103.1	19.0	70.8	122.6	71.6	29.5	30.5	66.5	74.9	85.4
Link Distance (m)	212.1	192.1		581.3	581.3	581.3			355.8	355.8	355.8
Upstream Blk Time (%)					0						
Queuing Penalty (veh)					0						
Storage Bay Dist (m)			30.0				40.0	30.0			
Storage Blk Time (%)			0	7		5	0	2	5		
Queuing Penalty (veh)			0	2		20	0	11	5		

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	85.7	139.8	499.1	501.8	497.1	90.0	84.8	114.9	288.0	280.7	280.1	90.0
Average Queue (m)	70.3	93.9	325.7	359.3	277.4	63.5	83.2	114.7	278.0	255.6	172.5	34.9
95th Queue (m)	104.8	153.8	626.9	646.1	557.9	108.7	88.8	115.0	286.3	347.5	333.6	86.1
Link Distance (m)			490.7	490.7	490.7				273.5	273.5	273.5	
Upstream Blk Time (%)			1	2	1				54	3	1	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	45.0	45.0				30.0	55.0	55.0				30.0
Storage Blk Time (%)	57	64	36		51	23	93	94	19		46	4
Queuing Penalty (veh)	455	511	165		283	180	599	612	75		115	26

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	119.5	254.4	211.5	137.9	89.8	114.8	280.8	353.5	365.4	115.0
Average Queue (m)	95.0	142.6	121.9	79.3	24.2	59.1	126.1	143.2	155.6	80.4
95th Queue (m)	150.5	302.3	237.6	115.1	60.6	122.0	252.1	309.1	338.4	135.8
Link Distance (m)		640.1	640.1	640.1			450.5	450.5	450.5	
Upstream Blk Time (%)								0	0	
Queuing Penalty (veh)								1	2	
Storage Bay Dist (m)	70.0				60.0	70.0				70.0
Storage Blk Time (%)	64	4		23	0	26	30		32	18
Queuing Penalty (veh)	233	7		38	1	119	57		215	82

Intersection: 15: Octillo Blvd & Dixie Rd

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	T	R	L	T	T	T
Maximum Queue (m)	58.8	63.2	52.6	75.5	85.1	37.0	31.2	85.5	95.8	108.2
Average Queue (m)	36.3	15.9	11.8	18.3	24.8	3.8	9.6	26.2	34.3	42.4
95th Queue (m)	56.9	40.2	36.9	55.2	66.8	19.4	22.9	59.4	71.9	84.6
Link Distance (m)		432.9	450.5	450.5	450.5			581.3	581.3	581.3
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	30.0					20.0	35.0			
Storage Blk Time (%)	18	1			7	0	0	3		
Queuing Penalty (veh)	17	1			4	0	2	2		

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Intersection: 17: Springtown Trail & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	T	R	L	T	T
Maximum Queue (m)	21.8	27.2	27.1	18.6	10.9	74.3	78.6	94.2	32.8	9.8	76.6	76.4
Average Queue (m)	5.4	8.4	9.8	3.7	1.3	19.7	22.3	30.4	2.7	1.2	21.7	22.6
95th Queue (m)	15.8	20.3	22.8	12.4	6.9	53.5	58.9	72.1	19.7	6.2	58.0	57.5
Link Distance (m)		148.9	642.3			322.0	322.0	322.0			640.1	640.1
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	25.0			10.0	25.0				20.0	30.0		
Storage Blk Time (%)	0	0	30	4	0	3		8	0		3	
Queuing Penalty (veh)	0	0	5	1	0	0		2	0		0	

Intersection: 17: Springtown Trail & Dixie Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	84.2	19.0
Average Queue (m)	31.2	0.8
95th Queue (m)	68.2	11.7
Link Distance (m)	640.1	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		20.0
Storage Blk Time (%)	8	
Queuing Penalty (veh)	1	

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Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	49.1	102.6	124.1	79.9	320.1	314.9	57.0	95.5	100.5	103.4	10.2	79.6
Average Queue (m)	22.6	33.1	58.1	78.8	250.0	124.2	17.5	41.9	48.0	53.6	2.7	28.1
95th Queue (m)	42.5	91.0	126.7	86.6	394.0	305.6	42.5	87.8	97.8	101.4	9.5	68.6
Link Distance (m)		311.1	311.1		309.8	309.8		584.2	584.2	584.2		
Upstream Blk Time (%)					36	0						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (m)	50.0			60.0			35.0				55.0	50.0
Storage Blk Time (%)	1	4		84	0		4	19		16		0
Queuing Penalty (veh)	1	4		127	1		16	13		4		1

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	155.2	159.5	160.6	69.6
Average Queue (m)	73.5	75.6	78.4	7.2
95th Queue (m)	149.5	147.7	145.5	38.8
Link Distance (m)	322.0	322.0	322.0	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				50.0
Storage Blk Time (%)	26		20	
Queuing Penalty (veh)	34		9	

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Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	49.1	179.8	1032.5	1035.0	1035.5	195.0	134.9	164.9	1338.6	1338.8	1338.9	165.0
Average Queue (m)	20.4	66.5	1023.9	1024.0	1024.3	83.5	131.3	161.6	1255.5	1258.9	1250.0	72.0
95th Queue (m)	42.4	181.4	1027.7	1029.6	1030.0	215.7	148.0	182.5	1558.7	1545.2	1542.5	183.5
Link Distance (m)			1018.6	1018.6	1018.6				1325.8	1325.8	1325.8	
Upstream Blk Time (%)			51	47	48				54	27	27	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	135.0	135.0				150.0	105.0	105.0				105.0
Storage Blk Time (%)			54		56		88	90	45			53
Queuing Penalty (veh)			133		123		740	754	150			96

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	32.2	78.2	88.0	94.0	70.3	120.0	169.9	594.1	592.0	588.5	152.6
Average Queue (m)	13.8	43.8	51.0	57.3	19.1	118.8	169.0	567.1	511.5	327.9	46.8
95th Queue (m)	27.1	68.2	77.4	81.7	45.2	122.4	178.8	689.0	731.4	681.5	118.3
Link Distance (m)		344.5	344.5	344.5				583.9	583.9	583.9	
Upstream Blk Time (%)								47	2	1	
Queuing Penalty (veh)								0	0	0	
Storage Bay Dist (m)	65.0				65.0	70.0	70.0				70.0
Storage Blk Time (%)		1		8		92	92	26		35	1
Queuing Penalty (veh)		1		9		544	548	126		99	8

Intersection: 25: Northcliffe St & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	TR	L	T	T	TR
Maximum Queue (m)	28.8	38.5	39.1	17.6	19.2	26.8	45.5	49.4	10.8	90.4	94.0	105.9
Average Queue (m)	8.2	13.8	19.4	5.8	4.6	7.6	9.7	17.4	1.9	22.5	25.2	30.8
95th Queue (m)	23.1	27.3	33.7	14.4	13.9	22.0	28.5	38.8	7.9	68.1	75.4	84.9
Link Distance (m)		218.5		96.7		375.2	375.2	375.2		344.5	344.5	344.5
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	15.0		15.0		30.0				30.0			
Storage Blk Time (%)	10	10	30	1	0	0				4		
Queuing Penalty (veh)	10	2	8	1	0	0				1		

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Intersection: 28: North Park Dr & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	50.4	53.9	57.1	99.0	120.4	103.6	33.5	68.3	70.7	76.6	43.6	32.6
Average Queue (m)	22.7	24.4	30.3	60.0	49.2	47.7	11.7	26.0	30.2	36.5	9.8	13.5
95th Queue (m)	42.6	42.5	47.9	105.8	102.6	78.5	26.1	56.9	60.7	68.7	31.5	27.7
Link Distance (m)		174.1	174.1		341.5	341.5		407.7	407.7	407.7		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	40.0			45.0			55.0				30.0	65.0
Storage Blk Time (%)	4	1		40	5		0	2		14	0	
Queuing Penalty (veh)	6	1		90	8		0	1		8	0	

Intersection: 28: North Park Dr & Dixie Rd

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (m)	97.3	108.2	120.3
Average Queue (m)	40.3	49.9	58.3
95th Queue (m)	79.7	93.0	102.7
Link Distance (m)	375.2	375.2	375.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)	2		
Queuing Penalty (veh)	3		

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Intersection: 31: Williams Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	84.3	370.2	368.5	90.0	79.9	657.8	652.0	68.2	56.4	60.0	63.7	76.7
Average Queue (m)	26.9	362.3	362.6	43.8	79.8	607.7	542.9	11.3	30.2	32.8	36.6	44.6
95th Queue (m)	72.5	367.2	365.8	94.3	80.3	782.4	821.9	42.8	63.9	53.1	57.7	66.8
Link Distance (m)		357.8	357.8			644.2	644.2			327.0	327.0	327.0
Upstream Blk Time (%)		40	41			71	4					
Queuing Penalty (veh)		0	0			0	0					
Storage Bay Dist (m)	35.0			30.0	50.0			30.0	80.0			
Storage Blk Time (%)	1	58	59	10	93	8	28	0	2			21
Queuing Penalty (veh)	10	53	122	86	430	24	19	0	3			25

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	T	T	T	R
Maximum Queue (m)	36.6	109.7	232.9	238.9	243.7	45.0
Average Queue (m)	14.7	40.6	163.2	169.6	176.9	21.9
95th Queue (m)	29.0	97.6	279.2	280.9	282.0	52.0
Link Distance (m)			244.0	244.0	244.0	
Upstream Blk Time (%)			8	7	9	
Queuing Penalty (veh)			65	62	75	
Storage Bay Dist (m)	30.0	45.0				20.0
Storage Blk Time (%)	1	5	45		56	3
Queuing Penalty (veh)	2	39	73		86	23

Intersection: 34: Northampton St & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	106.0	124.6	28.7	61.6	66.5	64.0	28.7	36.5	171.8	179.7	191.9	29.0
Average Queue (m)	42.2	51.6	11.3	23.1	25.5	30.5	6.4	2.7	78.1	87.2	97.4	1.8
95th Queue (m)	96.7	128.0	24.4	51.7	57.4	60.7	20.7	22.5	169.2	178.8	191.2	14.3
Link Distance (m)	154.2	228.4		244.0	244.0	244.0			407.7	407.7	407.7	
Upstream Blk Time (%)	2	1										
Queuing Penalty (veh)	0	0										
Storage Bay Dist (m)			55.0				25.0	80.0				25.0
Storage Blk Time (%)				1		11	0		9		30	
Queuing Penalty (veh)				0		6	0		1		7	

Intersection: 37: Lascelles Blvd & Dixie Rd

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (m)	79.3	16.6	2.3
Average Queue (m)	29.0	4.0	0.1
95th Queue (m)	58.4	12.4	1.3
Link Distance (m)	179.2		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		60.0	20.0
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 39: Howden Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	TR	L	T
Maximum Queue (m)	28.0	93.9	99.8	64.8	57.1	75.1	16.4	24.7	30.7	41.1	29.3	114.9
Average Queue (m)	9.2	54.8	62.3	28.6	25.2	39.5	4.1	6.5	8.9	15.0	13.4	69.4
95th Queue (m)	21.6	85.2	90.8	55.9	46.4	63.4	12.7	20.5	24.8	33.7	27.4	114.9
Link Distance (m)		200.8	200.8		288.2	288.2		161.3	161.3	161.3		585.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	50.0			60.0			50.0				35.0	
Storage Blk Time (%)		11		3	0		0				0	25
Queuing Penalty (veh)		4		3	0		0				3	28

Intersection: 39: Howden Blvd & Dixie Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	124.1	130.8
Average Queue (m)	78.6	85.7
95th Queue (m)	127.5	135.2
Link Distance (m)	585.6	585.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 42: Queen St & Dixie Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	L	T	T	T	L	L
Maximum Queue (m)	189.9	750.3	750.7	748.0	198.5	193.3	235.8	794.2	793.9	790.0	55.8	57.6
Average Queue (m)	79.8	739.8	740.1	739.7	115.5	170.4	196.6	370.3	386.2	248.8	29.2	32.9
95th Queue (m)	224.5	745.0	745.3	743.4	262.8	233.5	290.3	834.5	873.1	666.7	57.7	59.1
Link Distance (m)		734.6	734.6	734.6				783.3	783.3	783.3		
Upstream Blk Time (%)		55	53	59				5	1	0		
Queuing Penalty (veh)		0	0	0				0	0	0		
Storage Bay Dist (m)	120.0				130.0	150.0	150.0				100.0	100.0
Storage Blk Time (%)		65		65		58	62	2		4		
Queuing Penalty (veh)		41		166		320	342	7		3		

Intersection: 42: Queen St & Dixie Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	167.5	168.7	56.4	41.2	63.1	89.8	183.0	181.9	185.0	165.0
Average Queue (m)	27.8	30.9	32.0	6.9	32.0	58.1	174.3	174.1	175.7	110.2
95th Queue (m)	96.5	99.6	48.6	26.6	51.3	104.8	183.4	183.0	184.1	217.3
Link Distance (m)	406.0	406.0	406.0				171.6	171.6	171.6	
Upstream Blk Time (%)	0	0					45	47	45	
Queuing Penalty (veh)	0	0					424	436	425	
Storage Bay Dist (m)				80.0	65.0	65.0				65.0
Storage Blk Time (%)					0	0	58		67	2
Queuing Penalty (veh)					3	3	210		211	11

Intersection: 45: Hazelwood Dr & Dixie Rd

Movement	EB	NB	SB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (m)	40.8	10.8	85.2	91.9	102.2
Average Queue (m)	13.1	1.9	29.3	33.4	37.6
95th Queue (m)	35.6	7.7	108.7	116.2	124.0
Link Distance (m)	159.1		161.3	161.3	161.3
Upstream Blk Time (%)			1	1	1
Queuing Penalty (veh)			8	10	12
Storage Bay Dist (m)		50.0			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 47: Hillside Dr & Dixie Rd

Movement	EB	NB	SB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (m)	150.7	30.1	289.2	297.0	298.7
Average Queue (m)	110.0	8.9	200.1	206.5	215.1
95th Queue (m)	191.3	22.6	397.3	401.5	401.8
Link Distance (m)	143.0		318.2	318.2	318.2
Upstream Blk Time (%)	55		11	11	14
Queuing Penalty (veh)	0		96	100	126
Storage Bay Dist (m)		40.0			
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Network Summary

Network wide Queuing Penalty: 7673

Summary of All Intervals

Run Number	1	2	3	4	5	Avg	
Start Time	4:45	4:45	4:45	4:45	4:45	4:45	
End Time	6:00	6:00	6:00	6:00	6:00	6:00	
Total Time (min)	75	75	75	75	75	75	
Time Recorded (min)	60	60	60	60	60	60	
# of Intervals	2	2	2	2	2	2	
# of Recorded Intvls	1	1	1	1	1	1	
Vehs Entered	20467	20089	20385	20444	20419	20126	20326
Vehs Exited	19281	18762	18841	19142	19160	18902	19012
Starting Vehs	2042	2051	1939	1942	1998	1911	1972
Ending Vehs	3228	3378	3483	3244	3257	3135	3287
Denied Entry Before	383	285	421	246	204	325	308
Denied Entry After	5790	5849	5949	5676	5903	5860	5833
Travel Distance (km)	40131	39230	38905	39723	39875	38511	39396
Travel Time (hr)	5349.4	5509.9	5570.2	5238.5	5387.4	5175.5	5371.8
Total Delay (hr)	4688.5	4863.4	4927.5	4584.4	4730.9	4539.9	4722.4
Total Stops	87191	90797	90083	89613	89977	84480	88690
Fuel Used (l)	72799.2	73566.1	73822.2	71505.2	73054.8	70176.1	72487.2

Interval #0 Information Seeding

Start Time	4:45
End Time	5:00
Total Time (min)	15
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg	
Vehs Entered	20467	20089	20385	20444	20419	20126	20326
Vehs Exited	19281	18762	18841	19142	19160	18902	19012
Starting Vehs	2042	2051	1939	1942	1998	1911	1972
Ending Vehs	3228	3378	3483	3244	3257	3135	3287
Denied Entry Before	383	285	421	246	204	325	308
Denied Entry After	5790	5849	5949	5676	5903	5860	5833
Travel Distance (km)	40131	39230	38905	39723	39875	38511	39396
Travel Time (hr)	5349.4	5509.9	5570.2	5238.5	5387.4	5175.5	5371.8
Total Delay (hr)	4688.5	4863.4	4927.5	4584.4	4730.9	4539.9	4722.4
Total Stops	87191	90797	90083	89613	89977	84480	88690
Fuel Used (l)	72799.2	73566.1	73822.2	71505.2	73054.8	70176.1	72487.2

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	
Directions Served	L	L	T	T	T	R	L	T	T	T	T	R	L
Maximum Queue (m)	149.9	199.9	697.4	697.5	697.1	130.5	149.8	704.0	706.8	709.3	130.0	125.0	
Average Queue (m)	146.6	193.9	613.5	596.8	327.8	30.6	37.2	697.4	697.7	698.4	39.3	122.6	
95th Queue (m)	161.7	226.7	893.2	884.2	780.3	91.8	112.8	700.3	702.4	704.2	120.0	132.8	
Link Distance (m)			686.2	686.2	686.2			692.4	692.4	692.4			
Upstream Blk Time (%)			29	2	1			55	53	57			
Queuing Penalty (veh)			0	0	0			0	0	0			
Storage Bay Dist (m)	100.0	100.0				50.0	60.0				30.0	80.0	
Storage Blk Time (%)	86	88	4		34	0		63		65	2	82	
Queuing Penalty (veh)	556	571	22		109	1		70		64	14	368	

Intersection: 6: Mayfield Rd & Dixie Rd

Movement	NB	NB	NB	NB	B14	B14	B14	SB	SB	SB	SB
Directions Served	L	T	T	R	T	T	L	T	T	T	R
Maximum Queue (m)	169.9	951.2	950.0	28.4	284.3	286.3	283.6	120.8	336.1	301.2	90.0
Average Queue (m)	167.2	690.3	613.4	10.4	93.3	94.2	76.0	57.9	91.1	92.3	82.6
95th Queue (m)	186.7	1195.8	1179.1	22.9	294.8	296.7	270.8	116.5	222.4	189.8	99.6
Link Distance (m)		928.9	928.9		277.2	277.2	277.2		330.4	330.4	
Upstream Blk Time (%)		30	18		10	9	6		0	0	
Queuing Penalty (veh)		263	156		60	54	36		0	0	
Storage Bay Dist (m)	80.0			75.0				80.0			30.0
Storage Blk Time (%)	86	2	3					14	3	41	53
Queuing Penalty (veh)	385	12	4					44	6	269	164

Intersection: 9: Father Tobin Rd & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	TR
Maximum Queue (m)	27.4	56.7	12.6	77.7	82.9	73.3	8.5	7.4	50.7	51.8	60.3
Average Queue (m)	11.1	28.0	2.5	21.6	21.9	18.5	0.4	1.2	19.7	17.9	24.6
95th Queue (m)	23.0	48.6	9.4	61.7	61.6	51.9	3.5	5.8	44.8	41.9	50.8
Link Distance (m)	212.1	192.1		581.3	581.3	581.3			356.1	356.1	356.1
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (m)			30.0				40.0	30.0			
Storage Blk Time (%)				3		2			3		
Queuing Penalty (veh)				1		0			0		

Intersection: 3: Countryside Dr & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	89.9	1133.8	463.0	90.0	149.9	1317.2	1255.5	90.0	115.7	219.1	225.4	203.0
Average Queue (m)	72.1	292.0	221.7	29.3	62.2	833.5	805.0	60.5	28.6	116.0	112.3	86.1
95th Queue (m)	108.7	731.0	384.3	86.1	148.9	1354.4	1283.7	118.4	81.1	203.0	198.6	175.7
Link Distance (m)		1247.6	1247.6			1312.6	1312.6			356.1	356.1	356.1
Upstream Blk Time (%)		0				4	3			1	0	
Queuing Penalty (veh)		0				0	0			3	2	
Storage Bay Dist (m)	30.0			30.0	60.0			30.0	105.0			
Storage Blk Time (%)	65	56	59	0	4	60	63	18		18		28
Queuing Penalty (veh)	361	106	48	1	23	97	159	112		29		60

Intersection: 3: Countryside Dr & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB	B14	B14
Directions Served	R	L	L	T	T	TR	T	T
Maximum Queue (m)	73.3	129.8	179.8	253.0	187.2	90.3	191.2	169.3
Average Queue (m)	26.0	121.7	159.2	180.8	59.1	52.1	65.4	45.3
95th Queue (m)	62.8	151.0	214.7	382.8	174.2	81.3	236.0	202.0
Link Distance (m)				277.2	277.2	277.2	928.9	928.9
Upstream Blk Time (%)				33	0			
Queuing Penalty (veh)				115	0			
Storage Bay Dist (m)	30.0	80.0	80.0					
Storage Blk Time (%)	2	81	83					
Queuing Penalty (veh)	9	155	159					

Queuing and Blocking Report
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Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	92.4	140.0	499.9	496.6	498.2	90.0	84.8	114.9	358.8	354.4	354.6	89.9
Average Queue (m)	90.3	139.3	494.7	469.2	349.9	24.8	80.9	112.1	352.6	315.6	251.0	22.8
95th Queue (m)	97.5	147.6	510.4	593.7	670.6	77.5	92.3	126.9	356.4	466.2	473.4	75.8
Link Distance (m)			490.7	490.7	490.7				348.1	348.1	348.1	
Upstream Blk Time (%)			57	5	4				67	16	17	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	45.0	45.0				30.0	55.0	55.0				30.0
Storage Blk Time (%)	95	95	24		40	1	95	96	33		46	1
Queuing Penalty (veh)	748	751	99		92	4	798	809	85		49	5

Intersection: 12: Sandalwood Pkwy & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	120.0	651.0	656.4	653.5	101.2	114.9	352.4	270.8	113.2	85.9
Average Queue (m)	119.8	587.0	489.0	400.8	42.3	112.8	223.5	70.9	32.0	42.5
95th Queue (m)	120.0	780.6	812.0	799.2	83.7	129.4	375.5	212.5	71.9	74.6
Link Distance (m)		640.1	640.1	640.1			450.2	450.2	450.2	
Upstream Blk Time (%)		57	4	1						
Queuing Penalty (veh)		392	30	8						
Storage Bay Dist (m)	70.0				60.0	70.0				70.0
Storage Blk Time (%)	87	6		28	2	86				1
Queuing Penalty (veh)	346	34		92	9	110				1

Intersection: 15: Octillo Blvd & Dixie Rd

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	T	R	L	T	T	T
Maximum Queue (m)	59.8	67.2	75.4	84.4	88.1	53.4	51.2	50.6	55.3	64.4
Average Queue (m)	36.5	17.6	20.2	20.4	26.5	10.4	20.0	16.4	18.4	25.6
95th Queue (m)	61.1	55.7	57.9	59.9	66.8	34.5	40.6	35.8	43.6	50.7
Link Distance (m)		432.9	450.2	450.2	450.2			581.3	581.3	581.3
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (m)	30.0					20.0	35.0			
Storage Blk Time (%)	17	0			8	0	4	1		
Queuing Penalty (veh)	12	1			14	1	10	1		

Intersection: 17: Springtown Trail & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	T	R	L	T	T
Maximum Queue (m)	31.8	27.3	69.7	26.0	89.8	324.3	321.9	326.7	77.0	13.8	29.3	23.8
Average Queue (m)	8.4	5.7	25.3	9.9	23.8	194.1	167.3	141.7	11.0	2.3	8.8	5.8
95th Queue (m)	23.9	19.9	98.1	28.5	83.1	403.0	355.1	311.3	48.6	9.6	24.3	17.2
Link Distance (m)		148.9	642.3			320.2	320.2	320.2			640.1	640.1
Upstream Blk Time (%)						25	1	1				
Queuing Penalty (veh)						184	10	7				
Storage Bay Dist (m)	25.0			10.0	25.0				20.0	30.0		
Storage Blk Time (%)	7	0	29	32	0	67		19	0	0	1	
Queuing Penalty (veh)	2	0	5	11	0	44		15	0	0	0	

Intersection: 17: Springtown Trail & Dixie Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (m)	30.9	8.4
Average Queue (m)	10.6	0.7
95th Queue (m)	24.5	4.8
Link Distance (m)	640.1	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		20.0
Storage Blk Time (%)	2	
Queuing Penalty (veh)	1	

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	69.5	88.7	91.0	76.6	84.8	74.8	75.0	585.2	535.7	356.1	94.8	29.3
Average Queue (m)	25.4	36.9	44.6	41.6	35.1	43.1	36.2	185.0	159.0	134.9	24.3	11.5
95th Queue (m)	69.2	81.1	72.6	72.8	63.1	66.1	84.5	493.4	414.8	340.1	77.6	23.4
Link Distance (m)		306.5	306.5		301.8	301.8		582.4	582.4	582.4		
Upstream Blk Time (%)								7	0	0		
Queuing Penalty (veh)								54	1	0		
Storage Bay Dist (m)	50.0			60.0			35.0				55.0	50.0
Storage Blk Time (%)	8	2		7	0		4	52		25		
Queuing Penalty (veh)	11	1		12	1		25	108		40		

Intersection: 19: Peter Robertson Blvd & Dixie Rd

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	52.4	47.4	53.8	14.3
Average Queue (m)	21.3	18.8	22.6	3.2
95th Queue (m)	44.0	38.9	43.6	10.5
Link Distance (m)	320.2	320.2	320.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				50.0
Storage Blk Time (%)	0		0	
Queuing Penalty (veh)	0		0	

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	157.5	179.9	1028.1	1027.3	1026.4	61.1	37.9	164.9	1338.7	1338.0	1337.4	165.0
Average Queue (m)	153.8	175.5	768.0	730.3	468.7	13.5	17.9	69.6	1236.5	1237.5	1236.0	131.2
95th Queue (m)	171.0	200.3	1307.4	1294.0	1079.1	38.8	33.1	182.1	1569.4	1561.1	1554.3	209.1
Link Distance (m)			1018.6	1018.6	1018.6				1326.0	1326.0	1326.0	
Upstream Blk Time (%)			29	1	1				38	33	36	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	135.0	135.0				150.0	105.0	105.0				105.0
Storage Blk Time (%)	71	78	0		2				59		59	2
Queuing Penalty (veh)	432	472	2		3				126		278	17

Intersection: 22: Bovaird Dr E & Dixie Rd

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	50.2	120.8	126.5	133.7	99.9	119.9	169.9	1289.2	1090.3	903.6	53.3
Average Queue (m)	23.4	80.1	86.7	92.2	32.3	118.4	167.9	664.4	324.6	123.5	20.3
95th Queue (m)	43.4	109.9	116.0	122.3	89.0	123.6	180.0	1298.9	841.4	503.6	40.7
Link Distance (m)		344.5	344.5	344.5				1555.2	1555.2	1555.2	
Upstream Blk Time (%)								2	0	0	
Queuing Penalty (veh)								0	0	0	
Storage Bay Dist (m)	65.0				65.0	70.0	70.0				70.0
Storage Blk Time (%)		20		31		94	94			0	0
Queuing Penalty (veh)		31		42		170	171			1	0

Intersection: 25: Northcliffe St & Dixie Rd

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	TR	L	T	T	TR
Maximum Queue (m)	13.6	27.3	25.2	24.1	27.0	59.9	67.5	90.2	15.8	44.8	42.5	49.9
Average Queue (m)	3.9	10.5	11.4	8.4	9.7	13.8	16.3	25.7	4.3	11.9	12.0	17.3
95th Queue (m)	11.8	21.6	23.5	19.6	22.7	40.5	48.5	63.0	13.1	33.0	32.7	41.6
Link Distance (m)		218.5		96.7		375.2	375.2	375.2		344.5	344.5	344.5
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	15.0		15.0		30.0				30.0			
Storage Blk Time (%)	2	7	12	5	0	1				1		
Queuing Penalty (veh)	1	1	5	2	2	1				0		

Intersection: 28: North Park Dr & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	66.0	92.8	84.7	53.8	204.2	212.2	45.3	95.5	99.7	115.3	78.8	54.9
Average Queue (m)	41.8	40.0	42.9	28.0	42.9	54.2	19.1	53.9	58.6	65.6	19.8	24.7
95th Queue (m)	69.8	101.2	77.9	47.7	110.6	119.8	37.0	93.5	96.3	105.6	59.7	44.3
Link Distance (m)		174.1	174.1		341.5	341.5		407.7	407.7	407.7		
Upstream Blk Time (%)		0	0		0	0						
Queuing Penalty (veh)		0	0		0	0						
Storage Bay Dist (m)	40.0			45.0			55.0				30.0	65.0
Storage Blk Time (%)	28	1		2	3		0	11		25	0	0
Queuing Penalty (veh)	40	2		4	3		2	16		52	2	0

Intersection: 28: North Park Dr & Dixie Rd

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (m)	57.1	63.6	70.5
Average Queue (m)	28.9	34.2	42.7
95th Queue (m)	51.2	59.0	68.7
Link Distance (m)	375.2	375.2	375.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	T
Maximum Queue (m)	84.9	364.4	363.9	79.7	79.9	656.1	652.3	90.0	67.2	101.3	114.4	122.7
Average Queue (m)	84.7	349.3	327.2	16.7	57.0	646.8	646.3	46.8	31.8	61.4	68.7	78.7
95th Queue (m)	84.8	416.2	442.8	51.4	94.0	669.2	669.0	101.2	56.0	93.6	104.2	114.2
Link Distance (m)		357.8	357.8			644.2	644.2			327.0	327.0	327.0
Upstream Blk Time (%)		62	3			40	37					
Queuing Penalty (veh)		0	0			0	0					
Storage Bay Dist (m)	35.0			30.0	50.0			30.0	80.0			
Storage Blk Time (%)	93	19	29	0	12	55	59	7		3		38
Queuing Penalty (veh)	363	47	55	1	91	125	116	53		8		52

Intersection: 31: Williams Pkwy & Dixie Rd

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	T	T	T	R
Maximum Queue (m)	90.0	109.8	240.9	227.1	103.8	45.0
Average Queue (m)	19.3	106.6	178.6	90.9	54.0	23.8
95th Queue (m)	62.5	120.2	316.5	206.8	88.8	51.4
Link Distance (m)			242.2	242.2	242.2	
Upstream Blk Time (%)			33	0		
Queuing Penalty (veh)			119	0		
Storage Bay Dist (m)	30.0	45.0				20.0
Storage Blk Time (%)	0	97	6		42	7
Queuing Penalty (veh)	2	236	9		56	18

Intersection: 34: Northampton St & Dixie Rd

Movement	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	T	R	L	T	T	T	R
Maximum Queue (m)	70.9	94.3	36.1	108.8	113.6	118.6	70.0	82.6	181.4	172.1	123.2	49.7
Average Queue (m)	27.9	35.4	16.7	45.6	49.6	56.2	13.5	11.0	69.4	59.3	50.2	11.4
95th Queue (m)	77.0	92.9	31.4	99.0	105.4	114.8	47.4	65.5	185.0	154.3	105.2	38.1
Link Distance (m)	154.2	221.4		242.2	242.2	242.2			407.7	407.7	407.7	
Upstream Blk Time (%)	3	1										
Queuing Penalty (veh)	0	0										
Storage Bay Dist (m)			55.0				25.0	80.0				25.0
Storage Blk Time (%)				7		18	0		23		18	0
Queuing Penalty (veh)				10		22	0		4		11	0

Intersection: 37: Lascelles Blvd & Dixie Rd

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (m)	31.4	20.5	8.0
Average Queue (m)	12.8	7.6	0.4
95th Queue (m)	24.7	17.4	4.2
Link Distance (m)	179.2		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		60.0	20.0
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 39: Howden Blvd & Dixie Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	TR	L	T
Maximum Queue (m)	34.6	43.6	60.1	98.7	93.8	105.5	52.0	91.9	100.6	105.2	37.5	69.1
Average Queue (m)	15.3	21.3	33.1	58.8	42.8	55.8	19.0	45.4	49.3	55.1	15.2	34.6
95th Queue (m)	29.8	37.8	51.5	97.5	79.1	86.9	37.8	90.3	97.6	104.4	30.5	60.4
Link Distance (m)		200.8	200.8		288.2	288.2		161.3	161.3	161.3		585.6
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	50.0			60.0			50.0				35.0	
Storage Blk Time (%)		0		21	2		1	10			1	7
Queuing Penalty (veh)		0		34	3		6	20			3	6

Intersection: 39: Howden Blvd & Dixie Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (m)	78.2	86.0
Average Queue (m)	41.4	49.5
95th Queue (m)	70.1	79.7
Link Distance (m)	585.6	585.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 42: Queen St & Dixie Rd

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	154.8	189.9	744.8	745.5	746.2	198.4	199.4	249.9	796.9	798.7	797.3	230.0
Average Queue (m)	145.3	184.7	652.2	641.2	543.7	116.9	70.6	240.8	789.2	789.0	788.7	169.2
95th Queue (m)	179.5	217.7	905.1	898.9	880.1	256.5	180.1	269.5	794.1	795.0	793.9	313.1
Link Distance (m)			734.6	734.6	734.6				783.3	783.3	783.3	
Upstream Blk Time (%)			27	4	3				42	34	35	
Queuing Penalty (veh)			0	0	0				0	0	0	
Storage Bay Dist (m)	120.0	120.0				130.0	150.0	150.0				130.0
Storage Blk Time (%)	76	78	42		46		0	5	59		61	
Queuing Penalty (veh)	479	490	160		205		0	51	248		143	

Intersection: 42: Queen St & Dixie Rd

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	T	R	L	L	T	T	T	R
Maximum Queue (m)	69.6	149.9	411.5	413.4	413.4	180.0	63.5	89.7	137.2	138.1	143.7	108.6
Average Queue (m)	42.1	115.6	408.6	389.9	381.2	114.9	34.8	44.3	77.9	80.3	84.6	18.9
95th Queue (m)	67.7	197.7	423.0	440.9	434.1	241.1	61.7	80.9	126.9	126.7	132.7	68.2
Link Distance (m)			406.0	406.0	406.0				171.6	171.6	171.6	
Upstream Blk Time (%)			31	4	4				0		0	
Queuing Penalty (veh)			0	0	0				0		1	
Storage Bay Dist (m)	100.0	100.0				80.0	65.0	65.0				65.0
Storage Blk Time (%)			70		75	1	2	3	22		37	0
Queuing Penalty (veh)			405		201	4	6	10	45		64	0

Intersection: 45: Hazelwood Dr & Dixie Rd

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (m)	9.2	9.8	27.3
Average Queue (m)	2.7	1.9	0.9
95th Queue (m)	9.2	7.6	21.0
Link Distance (m)	159.1		318.2
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		50.0	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 47: Hillside Dr & Dixie Rd

Movement	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LR	L	T	T	T	T	T	TR
Maximum Queue (m)	43.4	31.2	7.1	45.1	8.0	7.1	1.5	15.2
Average Queue (m)	14.7	13.8	0.3	1.6	0.3	0.3	0.1	1.4
95th Queue (m)	30.9	27.2	3.2	26.6	4.0	3.7	1.2	7.6
Link Distance (m)	143.0		171.6	171.6	171.6	318.2	318.2	318.2
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)		40.0						
Storage Blk Time (%)		0						
Queuing Penalty (veh)		1						

Network Summary

Network wide Queuing Penalty: 5864